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VOL. X

NO. 1

Carleton College

BULLETIN

ANNOUNCEMENT NUMBER

September, 1913



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NORTHFIELD, MINN.

Published by the College four times a year, in September, December,
March, and June.

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under Act of Congress of July 16, 1894.

Administrative Officers

DONALD JOHN COWLING, PH. D. (Yale), D. D. (Baker).
President on the Martha Walker Wilkinson Foundation.

LUTHER ALLAN WEIGLE, PH. D. (Yale).
Dean of the College.

EDWARD STRONG.
Dean of the Conservatory of Music.

JESSIE MAY SHORT, B. A. (Beloit), M. A. (Carleton).
Acting Dean of Women.

FREDERICK JOY FAIRBANK, M. A. (Yale).
Treasurer.

ELEANOR JANE GLADSTONE, B. A. (Carleton).
Librarian.

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Registrar, and Secretary of the Faculty.

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Superintendent of Gridley Hall.

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Superintendent of Nourse Cottage.

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Secretary to the President.

ALICE MARIA PAGE, B. S. (Carleton).
Secretary to the Treasurer.

MARGARET LIVINGSTON.
Assistant Librarian.

Faculty and Other Officers of Instruction 1913-14*

THE COLLEGE

DONALD JOHN COWLING, PH. D. (Yale), D. D. (Baker).
*President on the Martha Walker Wilkinson Foundation, and
Professor of Philosophy.*

HERBERT COUPER WILSON, PH. D. (University of Cincinnati).
*Director of the Observatory, and Professor of Mathematics and
Astronomy.*

ISABELLA WATSON, B. L. (Carleton).
Professor of French.

FRANZ FREDERICK EXNER, PH. D. (University of Pennsylvania).
Professor of Chemistry. (Sabbatical furlough 1913-14).

EZRA THAYER TOWNE, PH. D. (University of Halle-Wittenberg).
Professor of Economics.

LUTHER ALLAN WEIGLE, PH. D. (Yale).
*Dean, and Professor of Mental and Moral Philosophy on the
John Chandler Williams Foundation.*

FRED BURNETT HILL, B. L. (Carleton), B. D. (Hartford).
Professor of New Testament and Missions.

AXEL EBENEZER VESTLING, PH. D. (Yale).
Professor of German.

CURVIN HENRY GINGRICH, PH. D. (University of Chicago).
Professor of Mathematics and Astronomy.

WALTER MELVILLE PATTON, PH. D. (University of Heidelberg),
D. D. (Baker).
Professor of Old Testament and History of Religion.

NEIL STANLEY DUNGAY, PH. D. (University of Chicago).
Professor of Biology.

JOHN ELOF BOODIN, PH. D. (Harvard).
Professor of Psychology.

*Professors are arranged in the order of appointment; all others
alphabetically.

ARTHUR LESLIE KEITH, PH. D. (University of Chicago).
*Professor of Latin on the Horatio Nelson Brinsmade Founda-
tion.*

GEORGE BENJAMIN WOODS, PH. D. (Harvard).
Professor of English.

EDWARD T. BOZENHARD, B. A. (Cumberland University).
*Director of the Gymnasium, and Assistant Professor of Physi-
cal Education.*

ISAAC MERTON COCHRAN, M. A. (University of Michigan).
Assistant Professor of Rhetoric and Public Speaking.

THOMAS LUTHER HARRIS, PH. D. (University of Wisconsin).
Assistant Professor of Sociology.

JOHN WESLEY HORNBECK, PH. D. (University of Illinois).
Assistant Professor of Physics.

CLAUDE J. HUNT, B. A. (DePauw University).
*Director of Athletics, and Assistant Professor of Physical Edu-
cation.*

HENRY ROYER KREIDER, PH. D. (Johns Hopkins).
Assistant Professor of Chemistry.

CHARLES SUTPHIN PENDLETON, M. A. (Oberlin).
Assistant Professor of English. (Absent on leave 1913-14).

HERMAN JUSTUS THORSTENBERG, PH. D. (Yale).
Assistant Professor of History.

EMERY WINFIELD BALDUF, M. A. (University of Chicago).
Instructor in German.

JAMES EWING, M. A., B. Sc. (University of Aberdeen).
Instructor in Biology.

JULIA MAY HAWKES, M. A. (Columbia).
Instructor in Mathematics.

LEAL AUBREY HEADLEY, M. A. (Harvard).
*Instructor in Philosophy and Education. (Absent on leave 1913-
14).*

IRA D. HYSKELL, M. A. (Harvard).
Instructor in Classics.

EDNA EUGENIA LOWE, B. O. (Northwestern).
Instructor in Public Speaking and Physical Education.

JESSIE MAY SHORT, M. A. (Carleton).
Acting Dean of Women, and Instructor in Mathematics.

RAY ADDISON SIGSBEE, PH. D. (University of Heidelberg).
Instructor in English.

ETHEL MARGARET ADAMS, B. A. (Carleton).
Assistant in Biology.

THE CONSERVATORY

EDWARD STRONG,
Dean, and Professor of Voice.

FREDERICK LOCKE LAWRENCE, Mus. B. (Northwestern).
Professor of Piano, Organ, and Composition.

ALMEDA FRANCES MANN.
Instructor in Piano.

AGNES EASTMAN PAGE, B. A. (Carleton).
Instructor in History of Music.

Faculty Committees—1913-14

1. *On admission, student courses, and graduation:* PROFESSORS
WEIGLE, WILSON, TOWNE, WATSON, GINGRICH, AND KEITH.

2. *On religious life:* PROFESSORS HILL, WILSON, AND MISS SHORT.

3. *On library:* PROFESSORS TOWNE, DUNGAY, PATTON, AND MISS
GLADSTONE.

4. *On athletics:* PROFESSORS HILL, HUNT, AND BOZENHARD.

5. *On student interests:* PROFESSORS GINGRICH AND KEITH.

6. *On alumni interests:* PROFESSORS WILSON, HILL, WATSON AND
MISS GLADSTONE.

Announcements

Registration

The committee will be in session at Laird Hall on Monday and Tuesday, Sept. 8 and 9; on Monday from 2 to 5 p. m. and on Tuesday from 9 a. m. to 12 m. and from 2 to 5 p. m. Students are expected to complete their registration at the time indicated. A registration fee of two dollars will be charged those enrolling after Tuesday.

Candidates for admission to the college are urged to meet the committee on Monday if possible. It will facilitate registration if the candidates will send their certificates to the Registrar before Sept. 6.

Examinations

Examinations for making up deficiencies and for entrance to the College will be held on Monday, September 15.

The Opening Exercises

The opening exercises will be held in Willis Hall Chapel on Wednesday, Sept. 10, at 10:30 a. m. The address will be given by Professor W. M. Patton. Regular recitations will begin at 1:40 p. m.

Faculty Changes

The income from the increased endowment provided by the campaign of 1911-12 has made it possible this year to expand the teaching force of the College.

Dr. Walter Melville Patton has been elected professor of Old Testament literature and history of religion. After graduating from McGill University, Montreal, Canada, Mr. Patton continued his graduate work at the University of Chicago and in Germany where he received the degree of Ph. D. in Heidelberg in 1897. He has taught at Yale, Baker University, and Wesleyan Theological College, McGill University, coming to Carleton from the last mentioned institution.

Dr. Neil S. Dungay, who during the year 1912-13 was on leave of absence for graduate study at the University of Chicago where he received the degree of Ph. D., returns this year as professor of biology.

Dr. John E. Boodin, who comes as professor of psychology and education, is a graduate of Harvard University at which institution he took his doctor's degree. Professor Boodin, formerly head of the department of philosophy at Grinnell College, comes to us from the University of Kansas.

Dr. George B. Woods, who has been elected professor of English, is a graduate of Northwestern University. He received the degree of Ph. D. from Harvard and comes to Carleton from Miami University, Oxford, Ohio.

Dr. Herman Justus Thorstenberg, assistant professor of history, is a graduate of Bethany College and Yale University, taking his Ph. D. from the latter institution in 1904. He comes to Carleton from Midland College, Atchison, Kansas.

Dr. Thomas L. Harris, assistant professor of sociology, is a graduate of the University of Illinois, received his master's degree from Ohio State University and his doctor's degree from the University of Wisconsin. He comes to Carleton from Dakota Wesleyan.

Dr. H. R. Kreider, assistant professor of chemistry during the absence of Professor Exner, who takes his sabbatical furlough during 1913-14, is a graduate of Franklin and Marshall College of Lancaster, Pa., and also of the Eastern Theological Seminary of the same place. He received his Ph. D. from Johns Hopkins and comes to Carleton from the professorship of chemistry in the Baltimore Medical College. At the end of the present year the department of chemistry will be expanded, Dr. Kreider remaining as Dr. Exner's associate.

Athletic Director Claude J. Hunt is a graduate of DePauw University. He has been for two years athletic director at Hillsdale College, Michigan.

Dr. John W. Hornbeck, assistant professor of physics, is a graduate of Illinois Wesleyan University, having taken his master's degree from that institution and his doctor's degree from the University of Illinois.

Edward T. Bozenhard, assistant professor of physical education and director of the gymnasium, is a graduate of the Y. M. C. A. Training School of Chicago and of Cumberland University of Lebanon, Tenn.

Emery W. Balduf, instructor in German, is a graduate of Heidel-

berg University, Ohio. He received his master's degree from the University of Chicago, from which institution he comes to Carleton.

Ira D. Hyskell, instructor in classics, is a graduate of Allegheny College, and has had three years of graduate work, two at Harvard and one at Yale. For two years he was on the faculty of his alma mater, the first year as instructor and the second as assistant professor. Since that time he has been professor of Greek and Latin at Hedding College, Illinois.

Miss Julia M. Hawkes, instructor in mathematics, is a graduate of Carleton in 1901. Since receiving her master's degree from Columbia University she has been teaching at Beaver College, Beaver, Pa.

ENGLISH

The following courses are offered by the Department of English during the year 1913-14.

A—Literature.

1. AMERICAN LITERATURE.—A careful consideration of the formative influences in the development of the literature of America from the colonial period to the present time. The literature is studied in its relations to the underlying social, political, and religious conditions, and to the literature of Europe, especially of England. Lectures, assigned readings, and reports.

First Semester.—2 hours a week.

PROFESSOR WOODS.

2. INTRODUCTION TO ENGLISH LITERATURE.—An introductory course in English literature, considering the more important literary figures and movements from Anglo-Saxon times to the end of the nineteenth century. In all cases, the student will deal directly with the literature itself, and an attempt will be made throughout to enable him to find some basis for a genuine appreciation of the literature and for a sincere and reasonably intelligent opinion on the subject discussed. The literature read will be made the basis for a considerable amount of writing.

Second Semester.—4 hours a week.

PROFESSOR WOODS AND DR. SIGSBEE.

- 3 and 4. SHAKSPEARE.—A critical study of five of Shakspeare's plays: *Macbeth*, *Henry IV* (Part 1), *King Lear*, *Twelfth Night*, and *The Winter's Tale*. Additional reading from several others plays. The course continues throughout the year.

First Semester.—4 hours a week.

Second Semester.—2 hours a week.

PROFESSOR WOODS.

- 7 and 8. CHAUCER AND MIDDLE ENGLISH LITERATURE.—An introductory course for students who have had no training in Middle English. The first semester is devoted to the study of Chaucer. The Prologue and some of the Canterbury Tales are read and several of Chaucer's minor poems. During the second semester is read a considerable amount of Middle English literature from 1200 to 1500. Collateral reading in ballads and romances.

First and Second Semesters.—3 hours a week.

PROFESSOR WOODS.

9. THE ENGLISH NOVEL.—A study of the history and development of the English novel from its beginning to the present time. Attention is given to the prevailing types of fiction in European literature of the eighteenth and nineteenth centuries, and to various social, political, and religious movements as reflected in the type of literature under discussion. The style of individual novelists is also considered. Lectures, assigned readings and reports.

First Semester.—4 hours a week.

DR. SIGSBEE.

12. TEACHERS' TRAINING COURSE.—This course is designed especially for those Seniors who expect to teach English in the high school. The plan and aim of the high school course are discussed as well as the methods of instruction. A number of classics are studied from the point of view of high school work.

Second Semester.—1 hour a week.

PROFESSOR WOODS.

B—Rhetoric.

- 1 and 2. FRESHMAN ENGLISH.—The elements of effective writing, based upon direct study of selected authors. Practice in exposition, argumentation, description, and narration. Short themes each week, and long themes at stated intervals. A brief consideration of poetics. Frequent conferences with the instructor. Collateral reading.

First and Second Semesters.—3 hours a week.

PROFESSOR WOODS, ASSISTANT PROFESSOR COCHRAN, AND
DR. SIGSBEE.

- 3 and 4. ADVANCED COMPOSITION.—For those students who wish further work in exposition, description, and narration. This will include practice in writing criticisms, editorials, and short stories. Some attention is paid to gathering and ar-

ranging material for compositions of considerable length; the subjects of these will be drawn from work which the student is carrying on either in this department or in any other department of the College. Collateral reading. Frequent conferences with the instructor.

First and Second Semesters.—2 hours a week.

ASSISTANT PROFESSOR COCHRAN.

7a and 8a. NEWSPAPER REPORTING.—An elementary course providing instruction and practice in the details of the work of the newspaper reporter, including news-gathering and newspaper writing.

First and Second Semesters—1 hour a week. DR. SIGSBEE.

7b and 8b. NEWSPAPER REPORTING AND EDITING.—A continuation of course 7a-8a, which is prerequisite. The course is designed especially for members of the staff of *The Carletonia* or of the Press Bureau.

First and Second Semesters.—1 hour a week. DR. SIGSBEE.

C—Public Speaking.

Courses 1, 2, 3, 4, 5, 6, and 10 are offered in 1913-14 and are the same as in the catalogue with the exception that course 5 is offered three (3) hours a week.

PHYSICS

The courses in physics will be as described in the catalogue except that in place of courses 3 and 9 the following will be offered:

3 and 4. GENERAL PHYSICS.—A general course for students who do not take analytical geometry. Three hours recitation and one 2-hour laboratory period per week.

First and Second Semesters.—4 hours credit.

ASSISTANT PROFESSOR HORNBECK.

9. EXACT ELECTRICAL MEASUREMENTS.—Two recitations and two 2-hour laboratory periods per week. Prerequisites, Physics 1 and 2. Measurements of resistance, electro-motive force, current, self-induction, capacity, hysteresis, etc., together with the theory.

First Semester.—4 hours credit.

ASSISTANT PROFESSOR HORNBECK.

Lectures

A course of five numbers has been arranged and will consist of the following attractions:

Thursday, November 20, Katharine Goodson, Pianiste.

Tuesday, December 2, Henry J. Hadfield, Reader. (Rudyard Kipling, Poet and Man).

Tuesday, January 20, David and Clara Mannes, Piano and Violin.

Friday, February 13, Hugh Black, Lecture. (America Through Scotch Spectacles).

Friday, March 13, Gustav Holmquist, Song Recital.

In addition to the regular lecture course the Northfield Choral Union will give a concert in December. This will consist of Part Songs and well known soloists will assist. Detailed announcement will be given later.

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Harry T. Roth

VOL. X

NO. 3—EXTRA

Carleton College

BULLETIN

ANNOUNCEMENT OF THE COURSES
OFFERED IN 1914-15



THE LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

April, 1914

NORTHFIELD, MINN.

Published by the College four times a year, in September, December,
March, and June.

Entered April 4, 1905, at Northfield, Minn., as second-class matter,
under Act of Congress of July 16, 1894.

The annual catalogue published each year in March contains a full account of the current year's work in both the College and the Conservatory of Music.

This bulletin contains the preliminary College announcements for 1914-15, and a later bulletin to be issued in May will present the announcements for the Conservatory of Music. Any additions or changes either in the list of instructors or in the courses offered will be announced in the bulletin issued early in September.

CIVIL CALENDAR

1914.

	S	M	T	W	T	F	S
Jan.	..	..	..	..	1	2	3
	4	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	31
	..	..	..	..	..	..	..

July

	S	M	T	W	T	F	S
July	..	..	..	1	2	3	4
	5	6	7	8	9	10	11
	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	29	30	31	..
	..	..	..	..	..	..	..

Feb.

	S	M	T	W	T	F	S
Feb.	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	..	..	..	..	..	..	..
	..	..	..	..	..	..	..

Aug.

	S	M	T	W	T	F	S
Aug.	..	..	..	..	..	1	8
	2	3	4	5	6	7	8
	9	10	11	12	13	14	15
	16	17	18	19	20	21	22
	23	24	25	26	27	28	29
	30	31	..	..	..	..	..

Mar.

	S	M	T	W	T	F	S
Mar.	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	31	..	..	..	..
	..	..	..	..	..	..	..

Sep.

	S	M	T	W	T	F	S
Sep.	..	..	1	2	3	4	5
	6	7	8	9	10	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	..	..	..
	..	..	..	..	..	..	..

Apr.

	S	M	T	W	T	F	S
Apr.	..	..	..	1	2	3	4
	5	6	7	8	9	10	11
	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	29	30	..	..
	..	..	..	..	..	..	..

Oct.

	S	M	T	W	T	F	S
Oct.	..	..	..	..	1	2	3
	4	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	31
	..	..	..	..	..	..	..

May

	S	M	T	W	T	F	S
May	..	..	..	..	..	1	2
	3	4	5	6	7	8	9
	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
	31	..	..	..	..	..	..

Nov.

	S	M	T	W	T	F	S
Nov.	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	..	..	..	..	..
	..	..	..	..	..	..	..

June

	S	M	T	W	T	F	S
June	..	1	2	3	4	5	6
	7	8	9	10	11	12	13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	30	..	..	..	..
	..	..	..	..	..	..	..

Dec.

	S	M	T	W	T	F	S
Dec.	..	..	1	2	3	4	5
	6	7	8	9	10	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	31	..	..
	..	..	..	..	..	..	..

1915.

	S	M	T	W	T	F	S
Jan.	..	..	..	..	..	1	2
	3	4	5	6	7	8	9
	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
	31	..	..	..	..	..	..

Feb.

	S	M	T	W	T	F	S
Feb.	..	1	2	3	4	5	6
	7	8	9	10	11	12	13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	..	..	..	..	..	..
	..	..	..	..	..	..	..

Mar.

	S	M	T	W	T	F	S
Mar.	..	1	2	3	4	5	6
	7	8	9	10	11	12	13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	30	31	..	..	..
	..	..	..	..	..	..	..

Apr.

	S	M	T	W	T	F	S
Apr.	..	..	..	..	1	2	3
	4	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	..
	..	..	..	..	..	..	..

May

	S	M	T	W	T	F	S
May	..	..	..	..	..	1	8
	2	3	4	5	6	7	8
	9	10	11	12	13	14	15
	16	17	18	19	20	21	22
	23	24	25	26	27	28	29
	30	31	..	..	..	..	..

June

	S	M	T	W	T	F	S
June	..	..	1	2	3	4	5
	6	7	8	9	10	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	..	..	..
	..	..	..	..	..	..	..

College Calendar

1914

June 7-10, Commencement Week.
June 7, Sunday, Baccalaureate Sermon.
June 10, Wednesday
morning, Commencement Exercises.

SUMMER VACATION

September 7-8, Monday
and Tuesday, Registration for First Semester.

September 9, Wednesday,
10:30 a. m., First Semester Begins.

November 26, Thursday, Thanksgiving Day.

December 18, Friday,
4:00 p. m., Christmas Recess Begins.

1915

January 5, Tuesday,
8:00 a. m., Christmas Recess Ends.

January 21, 22, 23, Semester Examinations.

January 23, Saturday, First Semester Ends.

January 25, Monday, Final Registration for Second Semester.

January 26, Tuesday,
8:00 a. m., Second Semester Begins.

February 7, Sunday, Day of Prayer for Colleges.

February 22, Monday, Washington's Birthday.

March 26, Friday 4:00 p. m., Easter Recess Begins.

April 6, Tuesday, 8:00 a. m., Easter Recess Ends.

May 30, Sunday, Memorial Day.

June 3, 4, 5, Semester Examinations.

June 6-9, Commencement Week.

June 9, Wednesday, Second Semester Ends.

SUMMER VACATION

September 15, Wednesday,
10:30 a. m., First Semester Begins.

Administrative Officers

DONALD JOHN COWLING, PH. D. (Yale), D. D. (Baker).

President on the Martha Walker Wilkinson Foundation.

LUTHER ALLAN WEIGLE, PH. D. (Yale).

Dean of the College.

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Dean of Women.

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Treasurer.

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Librarian.

†—————

Registrar.

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Superintendent of Gridley Hall.

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Superintendent of Nourse Cottage.

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Secretary to the President.

ALICE MARIA PAGE, B. S. (Carleton).

Secretary to the Treasurer.

*ANSTICE ABBOTT.

Secretary to the Dean of the Conservatory.

MARGARET LIVINGSTON.

Assistant Librarian.

†To be announced later.

*Part time.

Faculty and Other Officers of Instruction 1914-15*

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Professor of French.

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Professor of Chemistry.

EZRA THAYER TOWNE, PH. D. (University of Halle-Wittenberg).

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Professor of New Testament and Missions.

AXEL EBENEZER VESTLING, PH. D. (Yale).

Professor of German.

*Three grades of faculty ranking are recognized: professor, assistant professor, and instructor. In cases where there is more than one full professor in a department, a department chairman for administrative purposes is appointed by the President.

Professors are arranged in the order of appointment; all others alphabetically.

CURVIN HENRY GINGRICH, PH. D. (University of Chicago).

Professor of Mathematics and Astronomy.

WALTER MELVILLE PATTON, PH. D. (University of Heidelberg), D. D. (Baker).

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Professor of Biology.

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Assistant Professor of Biology.

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Assistant Professor of Sociology.

LEAL AUBREY HEADLEY, M. A. (Harvard).

Assistant Professor of Philosophy and Education.

JOHN WESLEY HORNBECK, PH. D. (University of Illinois).

Assistant Professor of Physics.

CLAUDE J. HUNT, B. A. (DePauw University).

Director of Athletics, and Assistant Professor of Physical Education.

HENRY ROYER KREIDER, PH. D. (Johns Hopkins).

Assistant Professor of Chemistry.

CHARLES SUTPHIN PENDLETON, M. A. (Oberlin).

Assistant Professor of English. (Absent on leave 1914-15).

HERMAN JUSTUS THORSTENBERG, PH. D. (Yale).

Assistant Professor of History.

EMERY WINFIELD BALDUF, M. A. (University of Chicago).

Instructor in German.

WYMAN REED GREEN, M. A. (University of Kansas).

Instructor in Biology.

FRANCES ALLEN FOSTER, PH. D. (Bryn Mawr).

Instructor in English.

*JULIA MAY HAWKES, M. A. (Columbia).

Instructor in Mathematics.

IRA DAVID HYSKELL, M. A. (Harvard).

Instructor in Classics.

*AGNES E. WELLS, B. A. (University of Michigan).

Instructor in Mathematics.

†

Instructor in Physical Education for Women.

*Part time.

†To be announced later.

General Information

EXPENSES

Tuition, per semester of eighteen weeks.....	\$40.00
Laboratory Fees, per semester,	
Biology, all courses except 201, 202.....	4.00
Biology 201, 202.....	1.00
Chemistry, all courses except 101, 102.....	7.50
Chemistry 101, 102.....	3.50
Geology, all courses	4.00
Physics 201, 202.....	3.00
Physics 203, 204.....	3.50
Physics 307, 308.....	4.00
Breakage deposit (Biology, Chemistry, Physics)	5.00
Library Fee,	
For students, per semester.....	.50
For all others, per year.....	1.50
Gymnasium Fee,	
For men, per semester.....	2.00
For women, per semester.....	1.00
Student Privilege Fee, admitting to all athletic con-	
tests, debates, etc., per semester.....	2.50
Special Registration Fee (see page 10).....	2.00
Fee for private examination.....	2.00
Graduation Fee	5.00
Table board at Gridley Hall, for men, per semester..	72.00
Furnished rooms for young men in private residences,	
with heat, light and care, per week for each	
occupant.....	\$1.25 to \$2.00
Rooms and board in private families, including fuel	
and light, per week, from.....	\$5.00 to \$6.00
Total per year for tuition, library and gymnasium	
fees, board and room (not including laundry)	
for young women.....	\$325.00

All semester bills are payable at the time of enrollment.

No tuition bills are made for less than a semester, and no refund is given except in case of sickness necessitating an absence of a half semester or more, in which case half tuition will be refunded. Students taking more than 16 hours will be charged \$2.50 for each extra hour.

Music students taking college courses will be charged at the rate of \$8.00 per semester for a three hours course.

REQUIREMENTS FOR ADMISSION

I. ADMISSION BY CERTIFICATE.—The following candidates are admitted to the Freshman class on presentation of certificates signed by the proper authorities, showing the kind and amount of work done:

1. Graduates from any four-year course of a high school approved by the Minnesota State High School Board.

2. Graduates from any four-year course of high schools accredited by the North Central Association of Colleges and Secondary Schools, or by the state university of the state in which the school is situated.

Such certificates must represent a total of at least fifteen units of work, which shall include the following: English, three units; Mathematics, two units; and in addition two series of two units each, each series being chosen from one of the following groups of subjects: (a) Foreign languages, (b) History and social sciences, (c) Natural sciences and mathematics, (d) Vocational subjects.

The term *unit* means the equivalent of five recitations per week, for one year of at least thirty-six weeks, in one branch of study. In case of laboratory and shop work two periods are counted as the equivalent of one in recitation.

Blank forms of certificates will be furnished upon application to the Registrar.

II. ADMISSION BY EXAMINATION.—Candidates not presenting approved certificates may be admitted upon examination. Examinations will be given upon the work covered by the list of secondary units approved by the North Central Association of Colleges and Secondary Schools.

Candidates for admission by examination must meet the same specific requirements as those for admission by certificate.

HONORARY SCHOLARSHIPS

Honorary scholarships of \$50.00 each are offered to the first ranking student among the young men and to the first ranking student among the young women in each graduating class of an accredited four-year high school, provided that the superintendent certifies that such students are of honor grade.

ADVANCED STANDING

Candidates for admission from other colleges must bring certificates of honorable dismissal.

Candidates for the Bachelor's degree must complete at least one year of work, including the last semester of their course, in residence at this institution.

No advance credit will be allowed for work done in secondary schools except upon examination.

Graduates from the advanced courses of the Minnesota State Normal Schools will be given credit for a year of college work. They will be given provisional Sophomore standing, but will be conditioned in the required Freshman studies which they have not taken. In order to secure the year's credit the candidate must present a certificate signed by the President of the school, showing the studies pursued in the normal course.

REGISTRATION

The committee on registration will be in session at Laird Hall on Monday and Tuesday, Sept. 7 and 8, 1914, on Monday from 2 to 5 P. M. and on Tuesday from 9 A. M. to 12:00 M. and from 2 to 5 P. M. Students may complete their registration on either of these days. A registration fee of two dollars will be charged those enrolling after registration days.

Candidates for admission to the college are urged to meet

the committee on Monday if possible. It will facilitate registration if the candidates will send their certificates to the Registrar before Sept. 1.

REQUIREMENTS FOR GRADUATION

The degree of Bachelor of Arts or Bachelor of Science will be conferred upon a student who fulfils the conditions as to amount, grade and distribution of work stated under I, II, III, and IV below :

I. AMOUNT OF WORK.—A student must complete satisfactorily 120 semester hours of work, in addition to the required work in Physical Education (6 credits). A semester hour is defined as one hour of classroom work per week, or its equivalent, pursued for one semester.

The normal amount of work for a student is 15 hours a semester in addition to work in Physical Education; a minimum of 12 hours is required.

In beginning a language no credit will be given for less than a year's work.

Twenty-four hours is the maximum credit allowed in any one subject.

II. GRADE OF WORK.—A student must secure 120 grade credits. A student securing an "A" is given 3 grade credits for each hour so marked; a "B," two; and a "C," one. This means that an average of "C" must be maintained for the four years' work.

III. DISTRIBUTION OF WORK.

1. The student must conform to the requirements of the specific years of the course (see IV below).

2. The student must complete a major and two minors. A major is not less than eighteen hours, and a minor not less than twelve hours, in a single department. The major shall be chosen from one of the following groups of departments, and a minor from each of the other two.

I.	II.	III.
English	Bible	Astronomy
French	Economics	Biology
German	Education	Chemistry
Greek	History	Geology
Hebrew	Philosophy	Mathematics
Latin	Political Science	Physics
	Sociology	

3. Candidates for the B. A. degree may choose their major from any one of these three groups. Candidates for the B. S. degree must choose their major from Group III.

4. Choice of a major must be made before the end of Sophomore year, and reported to the Registrar. The department in which the student has made his selection shall then assign him an advisor, who must approve the student's subsequent elections of courses before such elections are presented for the approval of the committee on courses of study. The choice of a major is not to be changed except by vote of the faculty on recommendation of the department in which the major had been chosen.

5. Each student shall choose, under the advice and subject to the approval of his advisor, twelve hours additional to the major, of such a character as to support or reinforce the major. Courses counted toward a minor are not for that reason excluded from this list of supporting courses.

6. Candidates for the B. A. degree must have completed in secondary school and college a total of six years of work in foreign language, of which two years must be in Latin, and at least two years must be taken in college. Candidates for the B. S. degree must have completed in secondary school and college, a total of four years of work in foreign language, of which at least two years must be taken in college.

Students planning to take up graduate work upon completion of their college course, should secure a reading knowledge of French and German as early as possible.

IV. REQUIREMENTS IN SPECIFIC YEARS.

Freshman Year*B. A. Course—*

REQUIRED :

English
Language
Mathematics

ELECTIVE :

Bible
Biology
Chemistry
French
German
Greek
History
Latin
Public Speaking

B. S. Course—

REQUIRED :

English
Language
Mathematics

ELECTIVE :

Bible
Biology
Chemistry
French
German
Greek
History
Latin
Public Speaking

Candidates for the B. A. degree who present 3 units of mathematics for entrance may have an option between mathematics and ancient language in the requirements for the Freshman year. Of all other Freshmen a year of college mathematics is required. This for the first semester may be Higher Algebra or College Algebra according to previous preparation. For the second semester all who do not avail themselves of the option between mathematics and ancient language will take Trigonometry.

Sophomore Year*B. A. Course—*

REQUIRED :

Language
Psychology

B. S. Course—

REQUIRED :

Language
Two of the following:
 { Biology
 { Chemistry
 { Mathematics
 { Physics

Junior and Senior Years

The remaining courses of the Sophomore year and those of the Junior and Senior years are elective, subject to the requirements of the group system and to the sequence of courses within departments.

CLASSIFICATION

A student must have secured at least eighteen hour-credits and eighteen grade-credits at the beginning of the college year before being classed as a Sophomore; fifty-four hour-credits and fifty-four grade-credits before being classed as a Junior; and eighty-seven hour-credits and eighty-seven grade-credits before being classified as a Senior.

Courses of Instruction—1914-15

The following list of courses is offered for the year 1914-15. That students may be helped wisely to plan their elections, announcement is also made of certain courses to be first offered in 1915-16. The list of courses offered in 1913-14 is published in the bulletin to which this is a supplement.

Only courses numbered below 200 are open to Freshmen, and only those numbered below 300 are open to Sophomores. Odd numbers are used for courses offered in the first semester, and even numbers for those offered in the second semester.

ASTRONOMY

PROFESSOR WILSON.

Prerequisites: Mathematics 101 and 102.

Any course in astronomy may count toward a major or minor in the Department of Mathematics and Astronomy.

301. GENERAL ASTRONOMY.—A course in descriptive astronomy, with study of the apparatus in Goodsell Observatory and frequent evenings with the telescope.

Juniors, First Semester.—3 hours a week.

302. GENERAL ASTRONOMY.—A continuation of course 301.

Juniors, Second Semester.—3 hours a week.

303. PRACTICAL ASTRONOMY.—Open only to those who have taken courses 301 and 302. The student is instructed in methods of computing; problems involving the transformation of co-ordinates; the use of ephemerides; comparison of clocks; conversion of time; determination of clock errors with the transit instrument; and in the use of the equatorial telescope in connection with various problems. The majority of the clear evenings will be spent in observational work.

Seniors, First Semester.—3 hours a week.

304. PRACTICAL ASTRONOMY.—A continuation of course 303.

Seniors, Second Semester.—3 hours a week.

BIBLICAL LITERATURE

PROFESSOR HILL AND PROFESSOR PATTON.

For a major in Biblical Literature not more than six hours may be elected outside of the courses in Biblical Literature proper.

The supporting courses may be elected from the Junior or Senior courses in the Departments of Philosophy, Sociology, or English, not more than nine hours from the two first named departments, or three hours from the last named.

Professor Hill will be absent on Sabbatical furlough during 1914-15, and his courses are therefore not announced in this bulletin. The following courses are offered by Professor Patton for 1914-15.

A. Historical Courses.

101. HISTORY OF ANCIENT CIVILIZATIONS.—Including a sketch of the history of Babylonia, Egypt, the Semitic nations, Persia, Greece, and Rome from the earliest times to the establishment of Christianity. An introduction to the study of history and of Biblical literature.

Freshmen and Sophomores, First Semester.—3 hours a week.

102. THE APOSTOLIC AGE.—The origin and spread of Christianity down to the close of the New Testament period, together with the New Testament writings.

Freshmen and Sophomores, Second Semester.—3 hours a week.

- 103-104. THE EARLY TRADITION, THE EXODUS, THE CONQUEST, AND THE EARLY MONARCHY.—A sketch of Israel's history and literature from the beginning to the end of the United Kingdom.

Freshmen and Sophomores, First and Second Semesters.—3 hours a week.

- 201-202. THE HEBREW KINGDOMS AND THE JEWISH CHURCH.—A sketch of Israel's history and literature from the division of the kingdom to 70 A. D.

Sophomores, Juniors, and Seniors, First and Second Semesters.—3 hours a week.

B. Hebrew Language.

- 321-322. ELEMENTARY HEBREW.—For beginners, to give adequate preparation for the exegetical courses in a theological seminary.

Juniors and Seniors, First and Second Semesters.—4 hours a week.

(Courses in advanced Hebrew and in other Semitic languages may be arranged for.)

C. History of Religion.

221. INTRODUCTION TO THE STUDY OF RELIGION.—An inquiry into the nature and development of human religious belief and worship.

Sophomores, Juniors, and Seniors, First Semester.—3 hours a week.

222. THE RELIGIONS OF THE ANCIENT SEMITIC WORLD.—A sketch of the religions of Egypt, the Semitic peoples, and Persia.

Sophomores, Juniors, and Seniors, Second Semester.—3 hours a week.

BIOLOGY

PROFESSOR DUNGAY, ASSISTANT PROFESSOR EWING, AND MR. GREEN.

MAJOR.—Students who major in this department are required to have an elementary knowledge of physics and chemistry, such as may be gained from the high school or beginning college courses. Three different types of majors are offered by this department.

1. A major in Biological Theory may consist of courses 101, 102, 201, 202, Philosophy 301 and 302, and Sociology 201. This is the form of major recommended for B. A. students who wish to major in biology.

2. A major in Zoology shall include 18 hours chosen from courses 101, 102, 203, 204, 301, 304, 305, 306, 307, 308.

3. A major in Botany shall include 18 hours chosen from courses 101, 102, 205, 206, 307, 308, 309, 310, 311, 312.

MINOR.—Although all courses in the department count toward a minor, students are required to elect courses in some logical sequence.

SUPPORTING HOURS.—Supporting hours for those majoring in biology shall be elected, with the permission of the chairman of the department, from the following list: Advanced course in biology (not more than 6 hours), chemistry, geology, philosophy, physics, sociology.

ADVICE.—Students who expect to teach science after leaving college or who plan to study medicine will find it to their advantage to consult with the chairman of the department as early in their courses as is practicable. Those who expect to do graduate work in biology

should secure a reading knowledge of German and of French as soon as is convenient.

101. GENERAL BIOLOGY.—An effort is made to give in this course the fundamental laws of biology. The elements of general physiology are especially emphasized. Evolution and heredity are treated in a simple way. Illustrative material is drawn equally from the plant and animal kingdoms. No credit will be given unless this course is followed by course 102. A knowledge of elementary chemistry is demanded for this course. Three hours class and two hours laboratory each week.

First Semester.—3 hours credit.

102. GENERAL BIOLOGY.—A continuation of course 101, which is prerequisite.

Second Semester.—3 hours credit.

201. EVOLUTION AND HEREDITY.—Three hours class work each week. No laboratory. Prerequisite, course 102.

First Semester.—3 hours credit.

202. GENERAL EMBRYOLOGY.—Text: Kellicott's *General Embryology*. No laboratory. Three hours class each week. Prerequisite, course 102.

Second Semester.—3 hours credit.

203. GENERAL ZOOLOGY.—One hour class and four hours laboratory each week. Prerequisite, course 102.

First Semester.—3 hours credit.

204. GENERAL ZOOLOGY.—A continuation of course 203.

Second Semester.—3 hours credit.

205. GENERAL BOTANY.—Prerequisite, course 102.

First Semester.—3 hours credit.

206. GENERAL BOTANY.—A continuation of course 205.

Second Semester.—3 hours credit.

301. VERTEBRATE EMBRYOLOGY.—One hour class and four hours laboratory each week. Prerequisite, course 102. Recommended, course 204.

First Semester.—3 hours credit.

304. PALEONTOLOGY.—Prerequisite, course 102. Recommended, course 204.

Second Semester.—3 hours credit.

305. GENERAL HISTOLOGY.—One hour class and four hours laboratory each week. Prerequisite, course 102.

First Semester.—3 hours credit.

306. GENERAL HISTOLOGY.—A continuation of course 305.
Second Semester.—3 hours credit.
307. TECHNIQUE.—Methods of preparing gross and microscopic objects for study. One hour class and four hours laboratory each week. Prerequisite, course 102.
First Semester.—3 hours credit.
308. TEACHER'S COURSE.—Elsewhere listed as Education 304. Prerequisite, course 102, and as much other work as seems to be needed for the students concerned. Open to Seniors.
Second Semester.—2 hours credit.
309. MICROBIOLOGY.—A study of bacteria, moulds, etc. Prerequisite, course 102.
First Semester.—3 hours credit.
310. FOREST BOTANY.—A consideration of some of the problems of forestry. Field, laboratory, and class. Prerequisite, course 102.
Second Semester.—3 hours credit.
311. TAXONOMY.—Prerequisite, course 102. Field, laboratory, and class.
First Semester.—3 hours credit.
312. ECOLOGY.—Field, laboratory, and class. Prerequisite, course 102.
Second Semester.—3 hours credit.
313. ADVANCED WORK.—Individual work of a nature not covered by regular courses may be elected upon permission from the chairman of the department. Prerequisite, course 102, and such other work as may be necessary.
First Semester.—Credit by arrangement.
314. ADVANCED WORK.—As announced for course 313.
Second Semester.—Credit by arrangement.
315. SEASIDE WORK.—Summer work done at the Marine Biological Laboratory at Woods Hole, Mass., or at similar institutions will be credited under this course number. Credit according to work completed.

CHEMISTRY

PROFESSOR EXNER AND ASSISTANT PROFESSOR KREIDER.

Any of the courses in chemistry, except 101 and 102, may count towards a major in chemistry.

101. AN INTRODUCTION TO INORGANIC CHEMISTRY.—Illustrated lec-

tures and laboratory work. A large part of the laboratory time is devoted to quantitative experiments. It is the purpose of this course to develop the fundamental chemical laws and show the relation of chemical theory to those laws. Open to all students who have not had elementary chemistry. Six hours a week lectures and laboratory.

First Semester.—3 hours credit.

102. CONTINUATION OF COURSE 101.—Six hours a week lectures and laboratory.

Second Semester.—3 hours credit.

103. GENERAL INORGANIC CHEMISTRY.—Text: Alexander Smith's "*General Inorganic Chemistry*." The text is supplemented by lectures and class room experiments. The subject is developed in the light of modern theories. The work in the laboratory will consist of advanced experiments, such as are adapted to the lectures, and will familiarize the student more thoroughly with the general principles of chemistry. Open to students who have taken courses 101 and 102, or their equivalents. Six hours lectures and laboratory.

First Semester.—3 hours credit.

104. CONTINUATION OF COURSE 103.—Six hours lectures and laboratory.

Second Semester.—3 hours credit.

201. QUALITATIVE ANALYSIS.—This course consists mostly of laboratory work. Open to students who have taken courses 103 and 104. One lecture and six hours laboratory per week.

First Semester.—3 hours credit.

202. CONTINUATION OF COURSE 201.—Some time will be devoted to mineralogy and the identification of minerals. One lecture and six hours laboratory per week.

Second Semester.—3 hours credit.

301. QUANTITATIVE ANALYSIS.—A laboratory course, requiring no outside study. Talbot's *Quantitative Analysis* is used as a guide, and along with the gravimetric and volumetric work, electro-chemical analysis is carried through the year. Open to students who have taken courses 201 and 202. One lecture and six hours laboratory per week.

First Semester.—3 hours credit.

302. CONTINUATION OF COURSE 301.—Special attention is given to volumetric, electro and mineral analysis; for the latter of

which Washington's *Chemical Analysis of Rocks* is taken as a guide. Brief courses in gas analysis and assaying are also included. Open to students who have taken course 301.

Second Semester.—3 hours credit.

303. ORGANIC CHEMISTRY.—This course consists of lectures presenting the relations between the different classes of organic compounds, also the structural formulae and the evidences upon which they rest. The laboratory work will be devoted to the preparation of typical organic compounds, and the study of their properties. Open to students who have taken courses 201 and 202. Three hours lectures and three hours laboratory per week.

First Semester.—3 hours credit.

304. CONTINUATION OF COURSE 303.—Three hours lectures and three hours laboratory per week.

Second Semester.—3 hours credit.

305. APPLIED CHEMISTRY.—Special attention will be given to the application of chemistry to the various industries. One lecture and six hours laboratory per week.

First Semester.—3 hours credit.

306. CONTINUATION OF COURSE 305.—One lecture and six hours laboratory per week.

Second Semester.—3 hours credit.

ECONOMICS AND POLITICAL SCIENCE

ECONOMICS.

PROFESSOR TOWNE.

MAJOR REQUIREMENTS: Eighteen hours, including courses 201 and 202. The work in Industrial and Social History of England or in Social Pathology may count as three hours towards a major. Both of the above mentioned courses must be included either in the major, or in the supporting hours. The remaining supporting hours must include at least one other course in sociology, and one in history. The remaining work may be in history, sociology, or political science.

MINOR REQUIREMENTS: Twelve hours, including courses 201 and 202.

201. ECONOMICS.—Introductory Course. The nature and scope of economics, the characteristics of the present economic system, and a brief survey of the evolution of economic society; a study of the principles and problems of economics, ele-

mentary concepts, and the four subdivisions—consumption, production, value and exchange, and distribution.

First Semester.—3 hours a week.

202. ECONOMICS.—A continuation of course 201. Public industry and the relation of the state to private enterprise, public expenditures, public revenues; and a brief survey of the development of economic thought.

Second Semester.—3 hours a week.

307. LABOR PROBLEMS.—The significance of organized labor, a brief history of the labor movement, trade-union methods, methods of promoting industrial peace; a special study of such problems as industrial remuneration, child labor, woman labor, the sweated industries, and some recent tendencies in the industrial world.

First Semester, 1915-16.—3 hours a week.

308. SOCIALISM AND SOCIAL REFORM.—The history, theory, and present status of socialism; communism, anarchism, syndicalism; the life and works of some of the principal exponents of these various social theories; a general survey of the great social movement towards political and economic democracy in our own and in other countries.

Second Semester, 1914-15.—3 hours a week.

311. FINANCIAL HISTORY OF THE UNITED STATES.—Colonial financial legislation, the establishing of a national system, the United States banks, the independent treasury, and state banks; a study of the principal banking acts, currency measures, and tariff acts and panics.

First Semester, 1915-16.—3 hours a week.

312. MONEY AND BANKING.—The nature and functions of money, credit and the nature of credit transactions, the forms and issue of bank currency, the banking system of the United States and of the principal foreign countries, and the theory and history of bimetallism.

Second Semester, 1915-16.—3 hours a week.

315. PUBLIC FINANCE.—Public expenditures; public revenues; the development of taxation historically traced, excises and customs duties, property taxes and personal taxes; the growth and nature of public credit and public debts; and financial administration.

First Semester, 1914-15.—3 hours a week.

321. PRACTICAL POLITICS.—Seminar Course. A study of the workings of congress, of our state legislature, and of our municipal government; a study of men and measures. The Congressional Record, the various government publications, and periodical literature will be used as a basis for the work.
First Semester, 1914-15.—2 hours a week.
322. ECONOMIC AND SOCIAL PROBLEMS.—Research work and the use of original documents, the collecting of material and the preparation of special topics, the collecting of data for debates and the preparing of bibliographies. The aim of this course is to familiarize the student with the government publications and other material available for the study of economic and social problems. The course will be conducted as a seminar in economics and political science.
Second Semester, 1914-15.—2 hours a week.

POLITICAL SCIENCE.

MINOR REQUIREMENTS.—Twelve hours.

201. AMERICAN GOVERNMENT AND POLITICS.—The colonial origins of American institutions; the evolution of the federal constitution, the state constitutions, and of political issues in the United States; the general features of the federal system of government, and of the state governments.
First Semester, 1914-15.—3 hours a week.
202. AMERICAN GOVERNMENT AND POLITICS.—A continuation of course 201. State government; the constitutional basis of state government, the state executive department, the state legislature, and the state judicial system; the organization of municipal government, municipal functions; and social and economic legislation.
Second Semester, 1914-15.—3 hours a week.
307. POLITICAL SCIENCE.—Introductory Course. A general outline of political science, viewing the state from the standpoint of past development and present conditions; the nature, origin, evolution, and theories of the state; sovereignty, law, and the relation of state to state.
First Semester, 1915-16.—3 hours a week.
308. POLITICAL SCIENCE.—A continuation of course 307. The organization of government, separation and division of powers,

political parties, local and colonial government, and the province and functions of government.

Second Semester, 1915-16.—3 hours a week.

SEMINAR.—PRACTICAL POLITICS. See Economics 321-322.

EDUCATION

PROFESSOR BOODIN, PROFESSOR WEIGLE (Sabbatical furlough 1914-15),
AND ASSISTANT PROFESSOR HEADLEY.

MAJOR.—A major in Education consists of eighteen hours, elected from courses offered in the department, and must include courses 201, 202, and 303.

MINOR.—A minor in Education consists of twelve hours, elected from courses offered in the department.

201. PSYCHOLOGY.—This course is prerequisite to all other courses in the department. It is also announced as Philosophy 201.
Sophomores, First Semester.—3 hours a week.

202. PSYCHOLOGICAL PRINCIPLES OF TEACHING.—An application of the principles and laws of psychology to teaching, with an examination of the tendencies in modern educational thought as to the aims, values and essential content of education.
Text-books: James' *Talks to Teachers*, Bagley's *Educative Process*.

Sophomores, Second Semester.—3 hours a week.

301. HISTORY OF EDUCATION.—A survey of the educational theories and systems of the Greeks, Romans, and Middle Ages, with a more detailed study of the subject from the Renaissance to the present time. Text-book: Monroe's *History of Education*, with lectures and reports.

Juniors, First Semester.—3 hours a week.

302. EDUCATIONAL ADMINISTRATION.—A study of the organization and administration of education in the United States, with especial attention to the school system of Minnesota. Text-book: Dutton and Snedden's *Administration of Public Education in the United States*.

Juniors, Second Semester.—3 hours a week.

303. SECONDARY EDUCATION.—A course of special training for high school work. The aims, methods, and current problems of secondary education are discussed. By special arrangement with the Northfield high school, the members of the class devote two hours each week to observation of the life and

classroom work in that school. Throughout the year, the members of the class have opportunity for practice teaching in the Northfield high school, acting as tutors, as substitute teachers, and as teachers of special classes which are organized and placed in their charge. Text-books: Brown's *The American High School*, Johnston's *High School Education*. Supplementary readings, reports and discussions.

Seniors, First Semester.—3 hours a week.

304. TEACHERS' COURSE IN BIOLOGY.—This course is also announced as Biology 308.

Seniors, Second Semester.—2 hours credit.

308. TEACHERS' COURSE IN ENGLISH.—This course is also announced as English 328.

Seniors, Second Semester.—2 hours a week.

310. TEACHERS' COURSE IN GERMAN.—This course is also announced as German 308.

Seniors, Second Semester.—2 hours a week.

312. TEACHERS' COURSE IN HISTORY.—This course is also announced as History 306.

Seniors, Second Semester.—2 hours a week.

314. TEACHERS' COURSE IN LATIN.—This course is also announced as Latin 302.

Seniors, Second Semester.—2 hours a week.

316. TEACHERS' COURSE IN MATHEMATICS.—This course is also announced as Mathematics 306.

Seniors, Second Semester.—2 hours a week.

318. TEACHERS' COURSE IN PHYSICAL EDUCATION.—This course is also announced at Physical Education 303.

First Semester.—2 hours credit.

320. TEACHERS' COURSE IN PHYSICS.—This course is also announced as Physics 312.

Second Semester.—2 hours credit.

ENGLISH

PROFESSOR WOODS, ASSISTANT PROFESSOR CARTER,
ASSISTANT PROFESSOR COCHRAN AND DR. FOSTER.

REQUIREMENT.—English 101-102 is required of all candidates for a degree. It may not be counted toward either a major or a minor in English.

English 211 is required of all students who make unsatisfactory grades in English 101-102.

MAJOR.—A major in English consists of eighteen hours selected from courses in the department, in addition to course 101-102.

MINOR.—A minor in English consists of twelve hours selected from courses in the department, in addition to course 101-102.

SUPPORTING HOURS.—Twelve supporting hours in addition to the major requirements must be selected from courses in English or in other subjects with the approval of the department.

English 213-214 is prerequisite to all courses in English literature above 310. Course 211 may be substituted for course 213 in satisfying this requirement.

Public speaking 101-102 may not be counted toward either a major or a minor in English.

A. Composition and Rhetoric.

101-102. FRESHMAN COMPOSITION.—The elements of effective writing based upon study of selected authors, with practice in various forms of composition. Frequent conferences with the instructor. Collateral reading.

First and Second Semesters.—3 hours a week.

201-202. NEWSPAPER WRITING.—An elementary course providing instruction and practice in the details of the work of the newspaper reporter, including news gathering and newspaper writing. Theory and practice of editorial writing.

First and Second Semesters.—2 hours a week.

301-302. ADVANCED COMPOSITION.—Practice in writing, with brief studies of various types, such as the editorial, the essay, and the short narrative sketch. Attention is given to the technique and the style of the short story. Frequent conferences with the instructor. Collateral reading.

First and Second Semesters.—3 hours a week.

303-304. NEWSPAPER WRITING.—An advanced course, open only to members of the staff of *The Carletonia*, and of the Carleton Press Bureau. Course 201-202 is prerequisite.

First and Second Semesters.—1 hour a week.

For courses in argumentation, debate, and oration writing, see public speaking 204 and 301.

B. Literature and Language.

211. COMPOSITION AND LITERATURE.—A course combining practice in writing with study of literary prose of the eighteenth and

nineteenth centuries. It is designed especially to re-enforce the work of course 101-102, and is required of students who make unsatisfactory grades in that course.

First Semester.—3 hours a week.

- 213-214. INTRODUCTION TO ENGLISH LITERATURE.—An introductory course in English literature, the aim of which is to enable the student to find some basis for a genuine appreciation of literature. Attention is given to the development of English prose and poetry, and to the principal types of literature, such as epic, lyric, drama, essay, novel, etc.

First and Second Semesters.—3 hours a week.

- 311-312. ANGLO-SAXON.—A careful study of the Anglo-Saxon language and a brief survey of the literature. Representative selections of Anglo-Saxon prose and poetry are read, including *Béowulf*, which is studied as a monument of both the life and the literature of the period. Given in 1915-16 and in alternate years.

First and Second Semesters.—3 hours a week.

- 313-314. CHAUCER AND MIDDLE ENGLISH.—An introductory course for students who have had no training in Middle English. Chaucer's Prologue is read, and some of the *Canterbury Tales* and minor poems; also a considerable amount of Middle English literature of the fourteenth and fifteenth centuries. Given in 1914-15 and in alternate years.

First and Second Semesters.—3 hours a week.

- 315-316. SHAKSPERE.—A critical study of five of Shakspeare's plays: *Macbeth*, *Henry IV*, *King Lear*, *Twelfth Night*, and *The Winter's Tale*. Collateral reading.

First and Second Semesters.—3 hours a week.

- 317-318. ELIZABETHAN DRAMA.—A study of the English drama from its origin to 1642. The main emphasis is placed upon Shakspeare, who is studied in his relation to other dramatists of the period and with reference to his own development as poet and dramatist. Specimens of miracle plays, moralities, and interludes are read, and representative plays of the leading dramatists. Given in 1914-15 and in alternate years.

First and Second Semesters.—3 hours a week.

319. SPENSER AND MILTON.—A study of non-dramatic English literature of the sixteenth and seventeenth centuries, with es-

pecial attention to Spenser and Milton. Given in 1915-16 and in alternate years.

First Semester.—3 hours a week.

320. EIGHTEENTH CENTURY LITERATURE.—A study of English literature from the Restoration to the death of Pope, with especial attention to Classicism. Given in 1915-16 and in alternate years.

Second Semester.—3 hours a week.

323. VICTORIAN POETRY.—A study of the chief poets of the Victorian period: Tennyson, Mrs. Browning, Browning, Arnold, Clough, Rossetti, Morris, and Swinburne.

First Semester.—3 hours a week.

324. VICTORIAN PROSE.—A study of the leading characteristics and tendencies of the Victorian period as represented in the prose works of Macaulay, Carlyle, Newman, Ruskin, and Arnold. Given in 1914-15 and in alternate years.

Second Semester.—3 hours a week.

325. LITERARY CRITICISM.—A study of the history of literary criticism, with practice in critical writing. Some time is devoted to a study of selected critical essays from modern prose writers. Given in 1914-15 and in alternate years.

First and Second Semesters.—3 hours a week.

326. THE ENGLISH NOVEL.—A study of the history and technique of the English novel from its beginning to the present time. Attention is given to the prevailing types of fiction in European literature of the eighteenth and nineteenth centuries and to various social and economic movements reflected in the type of literature discussed. Given in 1915-16 and in alternate years.

Second Semester.—3 hours a week.

327. HISTORY OF THE ENGLISH LANGUAGE.—A study of the development of the English language, considering the relations between English and other Germanic languages, the foreign elements in the language, the important changes with respect to form and usage, and other topics concerned with modern English idiom. Given in 1915-16 and in alternate years.

First Semester.—3 hours a week.

328. TEACHERS' TRAINING COURSE.—Elsewhere listed as Education 308. A study of the aim and plan of the high school course

in English, with consideration of the selection of texts and of the methods of instruction. Representative classics are studied in some detail. Open to Seniors who expect to teach English in high school.

Second Semester.—2 hours a week.

C. Public Speaking.

101-102. ELEMENTARY PUBLIC SPEAKING.—Study and practice in the effective delivery of literary masterpieces, with especial attention to voice training.

First and Second Semesters.—2 hours a week.

201-202. LITERARY INTERPRETATION.—Study and practice in the effective delivery of narrative, lyric and dramatic literature, with especial attention to Shakspeare and to modern drama.

First and Second Semesters.—3 hours a week.

203. EXTEMPORANEOUS SPEAKING.—Study and practice in the presentation of various forms of public address, with especial attention to the preparation and delivery of impromptu speeches upon topics of the day.

First Semester.—3 hours a week.

204. ARGUMENTATION AND DEBATE.—A careful study of the principles of argumentation, including analysis and brief drawing, with much practice in debating.

Second Semester.—3 hours a week.

301. THE ORATION.—A study of the lives and speeches of a number of great orators, accompanied with practice in writing and delivering orations.

First Semester.—3 hours a week.

302. INTERCOLLEGIATE DEBATE AND ORATORY.—A course providing training for students who represent the college in intercollegiate debates or oratorical contests. Bibliographies and speeches, typewritten and bound, are to be deposited in the library.

Second Semester.—3 hours a week.

304. INTERCOLLEGIATE DEBATE AND ORATORY.—A continuation of course 302. Not more than six hours credit may be earned in these two courses.

Second Semester.—3 hours a week.

305-306. ACTING DRAMA.—A course providing training for public presentation of plays under the auspices of the college.

First and Second Semesters.—1 or 2 hours a week.

- 307-308. ACTING DRAMA.—A continuation of course 305-306. Not more than four hours credit may be earned in these two courses.

First and Second Semester.—1 or 2 hours a week.

FRENCH

PROFESSOR WATSON.

A combination of the conversational and the grammar method is used. After the first year French is, as a rule, the language of the class-room. The French table at Gridley Hall affords an opportunity for practice in conversation. Any course taken after the Freshman year may count toward a minor in French. A major must include courses 301, 302, 303, and 304.

101. BEGINNERS' COURSE.—French grammar, Fraser & Squair. Lectures Faciles, Lazare.

First Semester.—4 hours a week.

102. CONTINUATION OF COURSE 101.—Study of irregular verbs. Reading of easy texts.

Second Semester.—4 hours a week.

201. MODERN FRENCH PROSE.—Short stories. Comedies. Composition, Koren.

First Semester.—3 hours a week.

202. VICTOR HUGO.—Novelist, dramatist, poet. Selected texts and poems.

Second Semester.—3 hours a week.

301. CLASSICAL LITERATURE.—Lectures on the History of Literature in the Seventeenth century. Readings from Boileau, La Fontaine, Mme de Sévigné and others. Composition, Comfort.

First Semester.—3 hours a week.

302. ROMANTIC LITERATURE.—Lectures on the literary movements of the Nineteenth century. Reading of modern novels and dramas, such as Loti's *Pecheur d'Islande* and Rostand's *Cyrano de Bergerac*.

Second Semester.—3 hours a week.

303. COUNEILLE AND RACINE.—A study of classic tragedy. Reading of two dramas of Corneille and two of Racine with biographical sketches of the authors.

First Semester.—3 hours a week.

304. **MOLIÈRE.**—A study of the life and times of the great comedian as illustrated in his works, *L'Avare*, *Les Précieuses*, *Ridicules*, *Les Femmes Savantes*, *Le Misanthrope*, *Tartuffe*.
Second Semester.—3 hours a week.

GEOLOGY

ASSISTANT PROFESSOR EWING.

A minor in this department shall consist of Geology 201, 202, and 303, along with one other approved course from any of the science departments.

The geological museum, which is at present housed in Williams Hall until adequate provision for its accommodation can be made contains a good collection of minerals, rocks, and fossils, and students are expected to make themselves acquainted with the principal groups of these.

201. **THE PRINCIPLES OF DYNAMICAL AND STRUCTURAL GEOLOGY.**—
 Recitations, laboratory and field work.
First Semester.—3 hours credit.
202. **HISTORICAL GEOLOGY.**—The elements of stratigraphy and palaeontology. Recitations and museum work.
Second Semester.—3 hours credit.
303. **PALAEONTOLOGY.**—(See Biology 304.)

GERMAN

PROFESSOR VESTLING AND MR. BALDUF.

MAJOR.—Any course will count toward a major with the exception of courses 101 and 102.

MINOR.—Any course will count toward a minor, but courses 101 and 102 will count for only 2 hours each.

Courses 101 and 102 and courses 201 and 202 should not be divided.

101. **ELEMENTARY GERMAN.**—Prokosch's German for Beginners.
 Bacon's *Im Vaterland*.
Freshmen, First Semester.—4 hours a week.
102. **ELEMENTARY GERMAN.**—Continuation of course 101. In addition some easy text such as Gerstäcker's *Germelshausen* will be read.
Freshmen, Second Semester.—4 hours a week.
201. **INTERMEDIATE GERMAN.**—Der Schwiegersohn, Baumbach, Kin-

dertränen, Wildenbruch. Composition, Pope's, Writing and Speaking German.

Sophomores, First Semester.—3 hours a week.

202. INTERMEDIATE GERMAN.—Readings from modern prose. The work in grammar and composition will be continued.

Sophomores, Second Semester.—3 hours a week.

203. HISTORY OF GERMAN LITERATURE.—This course is a general survey of the field of German literature and should precede any of the more special courses.

Sophomores and Juniors, First Semester.—3 hours a week.

204. LESSING.—Minna von Barnhelm, Nathan der Weise. A biography of Lessing will be studied and some attention given to the development of German literature immediately before and after Lessing.

Sophomores and Juniors, Second Semester.—3 hours a week.

- 301-302. GERMAN DRAMA.—Reading of selected dramas of the eighteenth and nineteenth centuries. Collateral reading on the lives and times of the authors read.

Juniors and Seniors, First and Second Semesters.—3 hours a week.

303. SCHILLER.—Wallenstein and some other of Schiller's works not previously read by the class. A biography of Schiller will be studied.

Juniors and Seniors, First Semester.—3 hours a week.

304. GOETHE.—Faust, Part I will be studied in detail and outlines of Part II given in lectures. A biography of Goethe will be studied.

Juniors and Seniors, Second Semester.—3 hours a week.

305. HISTORICAL AND SCIENTIFIC GERMAN.—This course is intended especially for those Seniors who plan to do graduate work and will need a working knowledge of the language for this purpose. The kind of reading done will depend upon the special needs of the class.

Seniors, First Semester.—3 hours a week.

306. CONVERSATION AND COMPOSITION.—This course is intended for those who expect to teach German, and will give practice in speaking and writing. It will be conducted in German. Consent of the instructor must be obtained.

Juniors and Seniors, Second Semester.—2 hours a week.

308. **TEACHERS' TRAINING COURSE.**—Elsewhere listed as Education 310. This course will be more practical than theoretical. It will include a practical study of various methods of teaching. The class will be limited in size and practice teaching will be provided.
Seniors, Second Semester.—2 hours a week.
310. **HISTORY OF GERMANY.**—This course is also announced as History 304.
Juniors and Seniors, Second Semester.—3 hours a week.

GREEK

PROFESSOR KEITH AND MR. HYSKELL.

REQUIREMENTS.—Candidates for the B. A. degree entering with three units of mathematics have the option of an alternate requirement between mathematics and ancient language.

See under Latin for the requirements of a major in ancient languages.

MAJOR.—A major in Greek shall include 201-2; 301-2; 351; and such other courses above 200 as shall make a total of eighteen hours.

MINOR.—A minor shall consist of 101-2; 201-2.

SUPPORTING HOURS.—Those who major in Greek may choose their supporting hours from additional Greek, Latin, advanced German, advanced French, ancient history, philosophy, education, Biblical literature.

Courses 231-2 are open to all students without any prerequisite Greek.

101. **ELEMENTARY GREEK.**—The essentials of grammar. Xenophon begun. No credit unless followed by 102.

First Semester.—4 hours a week.

102. **XENOPHON.**—The Anabasis, Books I-II. The emphasis is laid upon forms and constructions.

Second Semester.—4 hours a week.

201. **XENOPHON.**—The Anabasis continued. HOMER, Iliad.

First Semester.—3 hours a week.

222. **HOMER.**—Iliad and Odyssey. The emphasis is placed upon the poetic qualities and the significance of Homer in the world's literary history.

Second Semester.—3 hours a week.

231. **GREEK LITERATURE** (in English translations).—The origin and

development of the main departments of literature with illustrations from Homer, the Greek dramatists, etc.

First Semester.—2 hours a week.

- 232 GREEK AND ROMAN MYTHOLOGY.—Origins, development, and influence on subsequent literature, including English.

Second Semester.—2 hours a week.

301. HERODOTUS.—Selected portions will be read rapidly. LYSIAS. Selected orations. Introduction to Attic oratory.

First Semester.—3 hours a week.

302. PLATO.—The Apology and Crito. Introduction to Greek philosophy.

Second Semester.—3 hours a week.

351. DEMOSTHENES.—On the Crown. ARISTOPHANES. The Clouds.

First Semester.—3 hours a week.

352. GREEK DRAMA.—Prometheus Bound of Aeschylus and Antigone of Sophocles.

Second Semester.—3 hours a week.

HISTORY

ASSISTANT PROFESSOR THORSTENBERG.

MAJOR REQUIREMENTS.—15 hours in history, together with 15 supporting hours in Group 2 (see page 12), of which at least 3 shall be chosen in each of the Departments of Economics, Sociology, and Political Science.

MINOR.—12 hours chosen from any of the courses in the department.

101. MEDIEVAL HISTORY.—A general survey of the History of Continental Europe from the Germanic migrations to the beginning of the fourteenth century.

Freshmen, First Semester.—3 hours a week.

102. MODERN EUROPEAN HISTORY.—A continuation of course 101, the History of Continental Europe from the beginning of the fourteenth century to the present time, with special attention to the great movements that helped to produce the present conditions in Europe.

Freshmen, Second Semester.—3 hours a week.

201. AMERICAN COLONIAL HISTORY.—This course begins with the European backgrounds, traces the founding and develop-

ment of colonies in America, and closes with a brief survey of the revolutionary period.

Sophomores, First Semester, 1915-16.—3 hours a week.

202. POLITICAL HISTORY OF THE UNITED STATES.—Beginning at the close of the American Revolution, the significant political and constitutional events are treated with reference to their bearing on American conditions and problems of the present time.

Sophomores, Second Semester, 1915-16.—3 hours a week.

203. INDUSTRIAL AND SOCIAL HISTORY OF ENGLAND.—The early life of the people, social customs and methods in industry, the industrial revolution and the development of present industrial and social conditions.

Sophomores and Juniors, First Semester, 1914-15.—3 hours a week.

204. INDUSTRIAL AND SOCIAL HISTORY OF THE UNITED STATES.—The business aspects of colonization, the industrial development under British control, and the great epochs in American history treated primarily from their industrial and social aspects.

Sophomores and Juniors, Second Semester, 1914-15.—3 hours a week.

301. ENGLISH POLITICAL HISTORY.—A History of England from pre-historic times to the present, with reference to political affairs, and with some attention to the development of the English constitution.

Juniors and Seniors, First Semester, 1915-16.—3 hours a week.

302. EUROPE IN THE NINETEENTH CENTURY.—The political, social, and economic development of Europe in the last hundred years is traced after the readjustments that followed the Napoleonic wars. The general aim is to lead the student to a better appreciation of the principal issues and problems that confront our age.

Juniors and Seniors, Second Semester, 1915-16.—3 hours a week.

303. ENGLISH CONSTITUTIONAL HISTORY.—The various phases of English history will receive attention only where they help to explain the constitution. Some previous study of English history is presupposed.

Juniors and Seniors, First Semester, 1914-15.

304. GERMAN HISTORY.—A history of Germany from the earliest settlement to the present time, with special reference to the social and industrial conditions and the growth of German institutions.

Juniors and Seniors, Second Semester, 1914-15.—3 hours a week.

305. THE AMERICAN REVOLUTION.—An intensive study of the second half of the eighteenth century in American history, with the emphasis on political and constitutional results rather than on military events. The origin and the interpretation of the Declaration of Independence will receive special attention in this course.

Juniors and Seniors, First Semester, 1914-15.—3 hours a week.

306. TEACHERS' TRAINING COURSE.—Elsewhere listed as Education 312. A study of methods of teaching history, with special reference to the needs of teachers in the secondary schools. Lectures and assigned readings on the nature and scope of courses; examination and use of suitable text-books; discussion of problems connected with collateral readings, use and abuse of sources, map study, correlation, etc. Theories will be tested by practice wherever possible.

Seniors, Second Semester.—2 hours a week.

307. RENAISSANCE AND REFORMATION.—A short study of such topics as the Revival of Learning, Humanism and Scholasticism is followed by a more detailed consideration of the momentous changes that affected western Europe especially in the fifteenth and sixteenth centuries. Prominence will be given to the study of the leaders in each country.

Juniors and Seniors, First Semester, 1915-16.—3 hours a week.

LATIN

PROFESSOR KEITH, PROFESSOR BENTON, AND MR. HYSKELL.

All candidates for the B. A. degree who have not presented two units of Latin for admission are required to take Latin 11-12 and 21-22. These courses should be taken in the Freshman and Sophomore years. Students who enter with four units of Latin or have completed courses 11-12, 21-22 and 31-32 are admitted to Latin 101. Candidates for the B. A. degree entering with three units of mathematics have the option of an alternate requirement between mathematics and an ancient language.

MAJOR.—A major in Latin shall include 101-102, 111-112 and 201-202. Courses below 101 may not count on a major.

MINOR.—A minor shall include 101-102 and 111-112, and four hours above 200.

Supporting hours may be chosen from additional Latin, Greek, advanced German, advanced French, ancient history, philosophy, education, Biblical and English literature.

A major in ancient languages shall consist of eighteen hours distributed as nearly equally as possible between the courses eligible for a major in Greek and in Latin and the supporting hours shall be the same as those for a major in Greek or Latin.

11. LATIN GRAMMAR, CAESAR.—Gallic War, 2 books and Latin composition. For those who begin Latin in college.

First Semester.—4 hours a week.

12. LATIN GRAMMAR, CAESAR.—Continuation of course 11.

Second Semester.—4 hours a week.

21. CAESAR.—Gallic War, 2 books. CICERO, six orations or the equivalent. Latin composition is continued.

First Semester.—4 hours a week.

22. CONTINUATION OF COURSE 21.

Second Semester.—4 hours a week.

31. VERGIL.—Six books of the Aeneid are read. While syntax is not neglected more attention is now given to the literary qualities.

First Semester.—3 hours a week.

32. VERGIL.—Continuation of course 31.

Second Semester.—3 hours a week.

101. CICERO AND LIVY.—Cicero, De Senectute or De Amicitia; Livy, Selections.

First Semester.—3 hours a week.

102. HORACE.—Odes and Epodes. Careful attention is given to the meters and literary qualities of Horace.

Second Semester.—3 hours a week.

(Courses 101-102 must be accompanied by 111-112).

111-112. LATIN COMPOSITION.—Translation into Latin of connected passages.

First and Second Semester.—1 hour a week.

201. THE ROMAN DRAMA.—Plautus, Terence and Seneca. Study of one or more plays of each author and of the origin and development of the drama and its subsequent influence.

First Semester.—3 hours a week.

202. TACITUS AND PLINY.—Tacitus, Agricola and Germania. Pliny, Selected letters. A study is made of the style of these authors and of the characteristics of the Silver Latinity.
Second Semester.—3 hours a week.
211. THE HISTORY OF LATIN LITERATURE.—Lectures, assigned readings, papers.
First Semester.—1 hour a week.
212. ROMAN LIFE.—The course will include such topics as: The family, house, dress, amusements, food, sources of income and travel.
Second Semester.—1 hour a week.
301. CAESAR, CICERO, VERGIL.—Advanced course in the authors usually read in secondary schools, designed for supplementing and reinforcing the knowledge already possessed by the students, and recommended to those expecting to teach.
First Semester.—2 hours a week.
302. PROFESSIONAL COURSE.—Elsewhere listed as Education 314. Designed especially for those who expect to teach Latin. The practical problems of the teaching of secondary Latin are discussed and applied. Portions of Caesar, Cicero and Vergil are reviewed.
Second Semester.—2 hours a week.
321. CICERO.—Selected letters, studied from the standpoint of style, politics and personality.
First Semester.—2 hours a week.
322. ROMAN SATIRE AND ELEGY.—Horace, Juvenal; Tibullus, Propertius.
Second Semester.—2 hours a week.
341. LUCRETIUS.—De Rerum Natura. Books I, III and V. Aside from the interpretation of the text, some attention will be given to the philosophy represented by Lucretius and its sources and development.
342. PLAUTUS AND TERENCE.—Advanced course. Several plays of each author will be read and analyzed.
Second Semester.—3 hours a week.

MATHEMATICS

PROFESSOR WILSON, PROFESSOR GINGRICH, MISS HAWKES, AND
MISS WELLS.

REQUIREMENTS.—All students except those who avail themselves of the option between ancient languages and mathematics are required to take one year of mathematics beyond their high school credits.

Candidates for the B. S. degree must take at least courses 103 and 104.

A major in mathematics must include courses 201, 202, 203 and 204.

101. HIGHER ALGEBRA.—For those not having an entrance credit in this subject.

First Semester.—4 hours a week.

102. SOLID GEOMETRY.—For those not having an entrance credit in this subject.

Second Semester.—4 hours a week.

103. COLLEGE ALGEBRA.—For those presenting entrance credits in higher algebra. Review of quadratics, graphical representation, mathematical induction, the progressions, permutations, complex numbers, theory of equations, logarithms, determinants.

First Semester.—4 hours a week.

104. TRIGONOMETRY.—Plane and spherical.

Second Semester.—4 hours a week.

201. ANALYTIC GEOMETRY.

First Semester.—3 hours a week.

202. ANALYTIC GEOMETRY.—A continuation of course 201.

Second Semester.—3 hours a week.

203. DIFFERENTIAL CALCULUS.—Courses 203 and 204 cannot be taken without courses 201 and 202, but may be taken at the same time with them.

First Semester.—3 hours a week.

204. INTEGRAL CALCULUS.

Second Semester.—3 hours a week.

301. DIFFERENTIAL CALCULUS.—Second year.

First Semester.—3 hours a week.

302. INTEGRAL CALCULUS.—Second year.

Second Semester.—3 hours a week.

303. SELECTED SUBJECTS IN ALGEBRA AND TRIGONOMETRY.

First Semester.—2 hours a week.

304. SURVEYING.—Three hours a week classroom work during the first half of the semester. Six hours a week field and office work during the second half of the semester.
Second Semester.—3 hours a week.
- 305.—HISTORY OF MATHEMATICS.
First Semester—3 hours a week.
306. TEACHERS' COURSE IN MATHEMATICS.—Elsewhere listed as Education 316.
Second Semester.—2 hours a week.
307. THEORY OF EQUATIONS.
First Semester—3 hours a week.
308. DIFFERENTIAL EQUATIONS.
Second Semester.—3 hours a week.

PHILOSOPHY

PROFESSOR WEIGLE (Sabbatical furlough, 1914-15), PROFESSOR BOODIN, ASSISTANT PROFESSOR HEADLEY.

REQUIREMENT.—Philosophy 201 is required in the Sophomore year of candidates for the B. A. degree.

MAJOR.—18 hours, chosen from any of the courses of the department, constitute a major in philosophy.

MINOR.—12 hours, chosen from any of the courses of the department, constitute a minor in philosophy.

201. PSYCHOLOGY.—An elementary course in general psychology, beginning with the structure and biological function of the nervous system and formulating the laws of mental growth and action. Text-book, Titchener, *A Text-book of Psychology*.

Sophomores, First Semester.—3 hours a week.

202. SOCIAL PSYCHOLOGY.—A study of mental growth and action as shown in social relationships. With this end in view the instincts, sentiments and the growth of self-conscious action are taken up. Further topics dealt with are the group mind, suggestibility, imitation, invention, etc. Text-books: *McDougall's Social Psychology* and *Ross' Social Psychology*.

Sophomores, Second Semester.—2 hours a week.

204. LOGIC.—A study of the principles and methods of inductive and deductive reasoning, with special emphasis on the work-

ing out of practical exercises. Text-book: Bode's *Outline of Logic*.

Sophomores, Second Semester.—2 hours a week.

301. HISTORY OF PHILOSOPHY (TO KANT).—A foundation course in philosophy, with special emphasis upon the development of philosophy to Kant. Text-book: Rogers' *History of Philosophy*.

Juniors, First Semester.—3 hours a week.

302. HISTORY OF PHILOSOPHY (SINCE KANT).—A continuation of course 301, giving special attention to Kant, Hegel, Spencer, and present-day philosophical movements. Text-books: Royce's *Spirit of Modern Philosophy*, James' *Will to Believe and Pragmatism*.

Juniors, Second Semester.—3 hours a week.

303. ETHICS.—A study of the principles of moral judgment. Text-books: Dewey and Tufts' *Ethics* and Royce's *Philosophy of Loyalty*. Prerequisite: course 201.

Seniors, First Semester.—3 hours a week.

304. PHILOSOPHY OF RELIGION.—A study of the philosophical grounds of theism and of the psychological principles of religion leading to a critical valuation of religious systems. Text-books: Boodin's *Truth and Reality*, James' *Varieties of Religious Experience*.

Seniors, Second Semester.—3 hours a week.

305. PRESENT PHILOSOPHICAL TENDENCIES: (a) THEORY OF KNOWLEDGE.—In this course the attitudes to truth implied in idealism, realism and pragmatism are taken up and their historical setting given. Special emphasis will be given to the American contribution to the problem of truth by Royce, James and the contemporary realists. Readings, lectures and discussions.

Seniors, First Semester.—3 hours a week.

306. PRESENT PHILOSOPHICAL TENDENCIES: (b) METAPHYSICS.—The typical tendencies of the day, including materialism, idealism, positivism and pluralism will be surveyed. An attempt at a constructive view of the fundamental problems of reality will be given. Among such problems, the conception of evolution, nature, mind, causality and value will be taken up. Readings, lectures and discussions.

Seniors, Second Semester.—3 hours a week.

308. SEMINAR IN PHILOSOPHY.—A course for advanced students only, taking up a critical study of some one of the great philosophers or of some topic to be chosen by the class. In 1913-14 the philosophy of Rudolf Eucken was studied.
Seniors, Second Semester.—2 hours a week.

PHYSICAL EDUCATION

ASSISTANT PROFESSOR BOZENHARD AND ASSISTANT PROFESSOR HUNT.

COURSES FOR MEN

In this department instruction is offered in a variety of those motor activities that are known to develop neuromuscular strength, endurance and co-ordination, and which are also known to develop certain valuable traits of character. In addition, the department aims to give the student such supervision, instruction and experience as will enable him to understand his own peculiar health possibilities and therefore to formulate intelligently his own policy of personal health control.

An examination, including measurements, strength tests, and a careful examination of the vital organs and the sense organs is required of every student on entering college, and is given one each semester thereafter.

Teams for intercollegiate competition in football, baseball, basketball, track and field athletics, indoor track athletics, cross country running and gymnastics are formed each year. Students are given credit for participation in athletics and gymnastics during these respective team seasons. In addition, inter-class competition in these various branches is held each season.

Football, basketball and baseball are under the direction of Mr. Hunt.

Hygiene, gymnasium work and track athletics are under the direction of Mr. Bozenhard.

No one is excused from the work of this department. Those unable to take the regular course because of physical disability will be given special work. Six hour credits are required of all students before graduation.

101. ELEMENTARY HYGIENE.—Ten lectures on "Personal Hygiene." Marching tactics. Graded mass drills. Apparatus work: mass work and graded work in squads. Gymnastic games. One hour a week in either wrestling, aquatics or indoor track work. Swimming: each student is required to learn

to swim. Out-of-door work: when weather permits. (3 hours).

First Semester.—1 credit.

102. **ELEMENTARY HYGIENE.**—Ten lectures on "Personal Hygiene." Floor work: continuation of the work of the previous semester. Swimming: each student is required to learn to swim with more than one variety of stroke. Out-of-door work: when weather permits. (3 hours).

Second Semester.—1 credit

201. **ADVANCED HYGIENE.**—"Some of the Common Causes of Disease"; ten lectures. Marching evolutions. Graded mass drills. Apparatus work: mass work and graded exercises for squads. Gymnastic games. One hour a week in either wrestling, fencing, boxing, aquatics or indoor track athletics. Swimming: each student is required to develop endurance in swimming. Out-of-door work: when weather permits. (3 hours).

First Semester.—1 credit.

202. **ADVANCED HYGIENE.**—"Carriers of Disease" and "Defenses against Disease"; ten lectures. Floor work: continuation of work of previous semester. Swimming: 100 yard swimming test. Out-of-door work: when weather permits. (3 hours).

Second Semester.—1 credit.

301. **GRADED MASS DRILLS AND APPARATUS WORK.**—Group games and contests. One hour a week in either wrestling, fencing, boxing, aquatics or indoor track athletics. Swimming: diving, rescue and resuscitation of drowning. Out-of-door work: when weather permits. (3 hours).

First Semester.—1 credit.

302. **CONTINUATION OF COURSE 301.**
(3 hours).

Second Semester.—1 credit.

303. **NORMAL COURSE.**—Elsewhere listed as Education 318. History and systems of physical education. Philosophy of physical training. Anthropometry, physical diagnosis and prescription of exercise. Theory and practice of teaching gymnastics. Prerequisite, biology 101. (2 hours).

First Semester.—2 credits.

304. CONTINUATION OF COURSE 303.—Normal practice. Coaching of athletics. (2 hours).
Second Semester.—2 hours credit.
305. NORMAL COURSE.—Advanced normal practice. Prerequisite, courses 303 and 304.
First Semester.—2 hours credit.
306. CONTINUATION OF COURSE 305.
Second Semester.—2 hours credit.

COURSES FOR WOMEN

The aim of the department of Physical Education for women is to promote a symmetrical development of the body as a basis for health and grace.

Physical examinations are made and special attention is given to the individual needs of the students. No one is excused from the work of this department. If disabilities exist special work is given for their removal. Six hour credits are required of all students before graduation. Each week throughout the Freshman and Sophomore years practical health lectures are given in such form as to furnish a logical and natural development of the theory and practice of daily hygiene.

101. (a) Lecture. (1 hour).
 (b) Walking drills, military drills, wands, poles, dumb-bells, breathing and relaxing exercises, poise work, games and general exercises for the securing of free bodily action and muscular control. (2 hours).
First Semester.—1 credit.
102. Continuation of Course 1 (a) and (b). (3 hours).
Second Semester.—1 credit.
201. (a) Lecture. (1 hour).
 (b) Wands, dumb-bells, indian clubs, walking drills, games, bending, stretching, and flexing movements. (2 hours).
First Semester.—1 credit.
202. Continuation of 201 (a) and (b).
Second Semester.—1 credit.
301. Advanced work in clubs and wands, rubber balls, gesture, pantomime and rhythmic movements. Games. (2 hours).
First Semester.—1 credit.
302. Continuation of Course 5. (2 hours).
Second Semester.—1 credit.

PHYSICS

ASSISTANT PROFESSOR HORNBECK.

MAJOR.—Courses 203-4, or 201-2 and 205, together with nine hours of advanced physics and the prerequisite mathematics, shall constitute a major in this department.

MINOR.—Courses 203-4, or 201-2 and 205, together with three hours of advanced physics and the prerequisite mathematics, shall count as a minor.

201. GENERAL PHYSICS.—An introductory course intended primarily for arts students and those science students who desire a year of physics merely as a supplement to their other courses. The emphasis is laid upon the physical meaning of the principles, and the use of mathematics is reduced as much as possible for a course of college grade. Two hours of class room work and one two-hour laboratory period a week. Text-book: Kimball's *College Physics*.

First Semester.—3 hours credit.

202. GENERAL PHYSICS.—A continuation of course 201. Same hours.
Second Semester.—3 hours credit.

203. MECHANICS AND HEAT.—A general course for students who expect to do advanced work in physics, chemistry or astronomy. It is also adapted to the needs of men who plan to take up engineering. Two hours recitation and two two-hour laboratory periods a week. Demonstration lectures are given occasionally. Text-book: Duff. Prerequisite, analytical geometry, which may be taken at the same time.

First Semester.—4 hours credit.

204. MAGNETISM, ELECTRICITY AND LIGHT.—A continuation of course 203. Prerequisite, course 203.
Second Semester.—4 hours credit.

205. LABORATORY PHYSICS.—A course designed especially in order to make it possible for students, having credit in Physics 201 and 202, to obtain the additional training in general physics necessary for registration in advanced courses in this department. Two two-hour laboratory periods a week. Prerequisite, courses 201, 202 and analytical geometry. Not open to students taking courses 203 and 204. (Not offered in 1915-16).

First Semester.—2 hours credit.

307. ELECTRIC MACHINERY—DIRECT CURRENT.—Beginning with a review of Ohm's law and electro-magnetic induction, this course includes the elementary theory of dynamo-electric machinery, together with laboratory work in self-induction; hysteresis of iron; efficiency, characteristic curves, etc., of direct current dynamos; and the calibration of measuring instruments. Text-book: Franklin and Esty, *Elements of Electrical Engineering*, Vol I. Laboratory manual: Swenson and Frankenfield, *The Testing of Electro-Magnetic Machinery*. Prerequisite, courses 203 and 204, or 201, 202 and 205. Calculus is advised. Class room work two hours a week and one three-hour laboratory period.

First Semester.—3 hours credit.

308. ELECTRIC MACHINERY—ALTERNATING CURRENT.—A brief study of generators, motors, transformers and alternating-current measuring instruments. At the end of this course a few demonstration lectures are given on electric waves and wireless telegraphy. Text-book: Franklin and Esty, Vol. II. Schedule same as course 307. Prerequisite, course 307.

Second Semester.—3 hours credit.

309. MECHANICS.—An advanced course, including both statics and dynamics. It is recommended to students interested in pure physics, astronomy, applied mathematics, or engineering. Text-book: Jean's *Theoretical Mechanics*. Prerequisite, physics 203-4 or 201-2, 205, and calculus. (Alternates with course 311. To be given 1914-15.)

First Semester.—3 hours a week.

311. THEORY OF HEAT.—The subject matter in this course is chosen with especial reference to the needs of advanced students in physics and physical chemistry, and those contemplating the pursuit of mechanical engineering. The principles of thermo-dynamics are studied and some time is devoted to their application to reciprocating steam engines, steam turbines and internal combustion engines. Text-book: Edser's *Heat for Advanced Students*. Prerequisite, physics 203 and 204, or 201, 202, 205, and calculus.

First Semester.—3 hours a week. (Alternates with course 309. (Not given in 1914-15).)

312. TEACHERS' COURSE.—Also listed as Education 320. A course for Seniors who expect to teach physics in the secondary

schools. One hour lecture and one discussion period a week. "*The Teaching of Physics*" by Mann is read and discussed; also articles in current school journals. An effort is made to furnish the beginning teacher with practical suggestions which will save him time and, possibly, help him over some of his difficulties in conducting a laboratory course. Occasional meetings are held in the laboratory in order to give the class a first hand knowledge of standard types of apparatus and to try out suggestions regarding certain experiments.

Second Semester.—2 hours credit.

SOCIOLOGY

ASSISTANT PROFESSOR HARRIS.

A major in sociology must include fifteen hours in that subject, plus three hours in economics (Economics 1).

A minor in sociology means twelve hours, entirely in the Department of Sociology.

Courses from which the twelve supporting hours may be taken, for those majoring in sociology, are as follows: economics, 6 hours, not including Economics 1; history, 6 hours; education, 6 hours; psychology, 5 hours; biology, 5 hours; Bible, 4 hours.

Sociology 201, or an equivalent, is a prerequisite to any other course in the department.

It is strongly recommended that students expecting to major in sociology should have 6 hours of history as early in their college course as possible.

201. GENERAL PRINCIPLES.—The nature and import of sociology, social evolution and social organization. The nature, elements and structure of society. General principles are developed and worked out in connection with a study of concrete social problems.

First Semester.—3 hours a week.

202. RURAL SOCIOLOGY.—The social problems of country life and tested methods for their solution. Rural social institutions. The characteristics of the rural mind and the rural community.

Second Semester.—3 hours a week.

301. SOCIAL PATHOLOGY.—The social problems created by the dependent, defective and delinquent classes. Considerable use is

made of first hand facts secured by research and personal visits to institutions.

First Semester.—3 hours a week.

302. SOCIAL BETTERMENT MOVEMENTS.—A study of the modern social settlement, its origin, philosophy and practical workings. The public school as a social center. The play ground and recreation movement. Employers' welfare work.

Second Semester.—3 hours a week.

303. ECONOMIC BASIS OF RURAL LIFE.—A consideration of the basic economic factors in rural life. A brief survey of the problems of farm management, agricultural co-operation, marketing and farm accounting.

First Semester.—2 hours a week.

304. STATISTICS.—A study of the elements of statistical method. Application of statistics to the analysis of sociological and economic material.

Second Semester.—2 hours a week.

306. SOCIAL AND ECONOMIC ASPECTS OF THE LIQUOR TRAFFIC.—A study of the organized liquor traffic, especially in its bearings upon the community life and welfare.

Second Semester.—1 hour a week.

307. THE CHURCH AND SOCIAL PROBLEMS.—The contribution of organized religion to social betterment. A constructive study of the function and the opportunity of the modern church, in the elimination of social weakness and abnormality. The pastor as a social worker and the church as a regenerative force.

First Semester.—3 hours a week.

308. SOCIAL CONTROL.—A study of the social beliefs, customs, institutions and practices, which are society's instruments in dealing with the individual.

Second Semester.—3 hours a week.

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1915/16

VOL. XI

NO. 3—EXTRA

Carleton College

BULLETIN

ANNOUNCEMENT OF THE COURSES
OFFERED IN 1915-16



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OF THE
UNIVERSITY OF ILLINOIS

March, 1915

NORTHFIELD, MINN.

Published by the College four times a year, in September, December,
March, and June.

Entered April 4, 1905, at Northfield, Minn., as second class matter
under Act of Congress of July 16, 1894

The annual catalog published each year in March contains a full account of the current year's work in both the College and the Conservatory of Music.

This bulletin contains the preliminary announcements for 1915-16. Any additions or changes in the list of instructors, as given in the annual catalog, or in the courses offered will be announced in the bulletin issued early in September.

College Calendar

1915

June 6-9,

Commencement Week.

June 6, Sunday,

Baccalaureate Sermon.

June 9, Wednesday

10:30 a. m., Commencement Exercises.

SUMMER VACATION

September 13-14, Monday

and Tuesday, Registration for First Semester.

September 15, Wednesday,

10:30 a. m., First Semester Begins.

November 25, Thursday,

Thanksgiving Day.

December 17, Friday,

4:00 p. m., Christmas Recess Begins.

1916

January 4, Tuesday,

8:00 a. m., Christmas Recess Ends.

January 25-29,

Semester Examinations.

January 29, Saturday,

First Semester Ends.

January 31, Monday,

Final Registration for Second Semester.

February 1, Tuesday,

8:00 a. m., Second Semester Begins.

February 6, Sunday,

Day of Prayer for Colleges.

February 22, Tuesday,

Washington's Birthday.

April 14, Friday 4:00 p. m.,

Easter Recess Begins.

April 25, Tuesday, 8:00 a. m.,

Easter Recess Ends.

May 30, Tuesday,

Memorial Day.

June 6-10,

Semester Examinations.

June 11-14,

Commencement Week.

June 14, Wednesday,

Second Semester Ends.

SUMMER VACATION

September 13, Wednesday,

10:30 a. m., First Semester Begins.

CIVIL CALENDAR

1915.

1916.

	S	M	T	W	T	F	S
Jan.	..	3	4	5	6	7	1 2
	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
	31	..	..	..	..	..	..

July

	S	M	T	W	T	F	S
July	..	4	5	6	7	8	1 2 3
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	18	19	20	21	22	23	24
	25	26	27	28	29	30	31
	..	..	..	..	..	..	..

Jan.

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Jan.	..	2	3	4	5	6	7 8
	9	10	11	12	13	14	15
	16	17	18	19	20	21	22
	23	24	25	26	27	28	29
	30	31	..	..	..	..	..

	S	M	T	W	T	F	S
Feb.	..	7	8	9	10	11	12 13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	..	..	..	..	..	..
	..	..	..	..	..	..	..

Aug.

	S	M	T	W	T	F	S
Aug.	1	2	3	4	5	6	7
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	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	31	..	..	..	..

Feb.

	S	M	T	W	T	F	S
Feb.	..	6	7	8	9	10	11 12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	..	..	..	..
	..	..	..	..	..	..	..

	S	M	T	W	T	F	S
Mar.	..	7	8	9	10	11	12 13
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	21	22	23	24	25	26	27
	28	29	30	31	..	..	..
	..	..	..	..	..	..	..

Sept.

	S	M	T	W	T	F	S
Sept.	..	5	6	7	8	9	10 11
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	19	20	21	22	23	24	25
	26	27	28	29	30	..	..
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Mar.

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Mar.	..	5	6	7	8	9	10 11
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	19	20	21	22	23	24	25
	26	27	28	29	30	31	..
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	S	M	T	W	T	F	S
Apr.	4	5	6	7	8	9	10 11
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	19	20	21	22	23	24	25
	26	27	28	29	30	..	..
	..	..	..	..	..	..	..

Oct.

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Oct.	..	3	4	5	6	7	8 9
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	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
	31	..	..	..	..	..	..

Apr.

	S	M	T	W	T	F	S
Apr.	..	2	3	4	5	6	7 8
	9	10	11	12	13	14	15
	16	17	18	19	20	21	22
	23	24	25	26	27	28	29
	30	..	..	..	..	..	..

	S	M	T	W	T	F	S
May	2	3	4	5	6	7	8
	9	10	11	12	13	14	15
	16	17	18	19	20	21	22
	23	24	25	26	27	28	29
	30	31	..	..	..	..	..

Nov.

	S	M	T	W	T	F	S
Nov.	..	7	8	9	10	11	12 13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	30	..	..	..	..
	..	..	..	..	..	..	..

May

	S	M	T	W	T	F	S
May	..	7	8	9	10	11	12 13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	30	31	..	..	..
	..	..	..	..	..	..	..

	S	M	T	W	T	F	S
June	..	6	7	8	9	10	11 12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	..	..	..
	..	..	..	..	..	..	..

Dec.

	S	M	T	W	T	F	S
Dec.	..	5	6	7	8	9	10 11
	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	29	30	31	..
	..	..	..	..	..	..	..

June

	S	M	T	W	T	F	S
June	..	4	5	6	7	8	9 10
	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	..
	..	..	..	..	..	..	..

General Information

EXPENSES

Tuition, per semester of eighteen weeks.....	\$50.00
Laboratory Fees, per semester,	
Biology 201, 308.....	1.00
Biology, other courses.....	4.00
Chemistry 101, 102.....	3.00
Chemistry, other courses.....	6.00
Geology, all courses.....	4.00
Physics 201, 202.....	3.00
Physics 203, 204.....	3.50
Physics 307, 308.....	4.00
Breakage deposit (Biology, Chemistry, Physics)	5.00
Student Privilege Fee, admitting to all athletic con-	
tests, debates, etc., per semester.....	2.50
Special Registration Fee (see page 5).....	2.00
Fee for private examination.....	2.00
Graduation Fee	5.00
Table Board at Gridley Hall, for men, per semester..	72.00
Furnished rooms for young men in private residences,	
with heat, light and care, per week for each oc-	
cupant	\$1.50 to \$2.00
Rooms and board in private families, including fuel	
and light, per week, from.....	\$4.50 to \$7.00
Total per year for tuition, board and room (not in-	
cluding laundry) for young women.....	\$350.00
For expenses for music see page 48.	

All bills are payable by the semester and in advance. No tuition bills are made for less than a semester, and no refund is given except in case of sickness necessitating an absence of a half semester or more, in which case half tuition will be refunded. Students taking more than 16 hours will be charged \$3 for each extra hour.

Music students taking college courses will be charged at the rate of \$10 per semester for a three hours course.

REQUIREMENTS FOR ADMISSION

I. ADMISSION BY CERTIFICATE.—The following candidates are admitted to the Freshman class on presentation of certificates signed by the proper authorities, showing the kind and amount of work done:

1. Graduates from any four-year course of a high school approved by the Minnesota State High School Board.

2. Graduates from any four-year course of high schools accredited by the North Central Association of Colleges and Secondary Schools, or by the state university of the state in which the school is situated.

Such certificates, however, must represent a total of at least fifteen units of work, which shall include the following: English, three units; Mathematics, two units; and in addition two series of two units each, each series being chosen from one of the following groups of subjects: (a) *Foreign languages, (b) History and social sciences, (c) Natural sciences and mathematics.

The term *unit* means the equivalent of five recitations per week, for one year of at least thirty-six weeks, in one branch of study. In case of laboratory and shop work two periods are counted as the equivalent of one in recitation.

Blank forms of certificates will be furnished upon application to the Registrar.

II. ADMISSION BY EXAMINATION.—Candidates not presenting approved certificates may be admitted upon examination. Examinations will be given upon the work covered by the list of secondary units approved by the North Central Association of Colleges and Secondary Schools. Candidates for admission by examination must meet the

*In view of the requirement of a minimum of four years of foreign language for graduation with the degree of B. S., and of six years for the degree of B. A., students are strongly advised to take at least two years of foreign language during their high school course.

same specific requirements as those for admission by certificate.

HONORARY SCHOLARSHIPS

Honorary scholarships of \$50 each are offered to the first ranking student among the young men and to the first ranking student among the young women in each graduating class of an accredited four-year high school, provided that the superintendent certifies that such students are of honor grade.

ADVANCED STANDING

Candidates for admission from other colleges must bring certificates of honorable dismissal.

Candidates for the Bachelor's degree must complete at least one year of work, including the last semester of their course, in residence at this institution.

No advance credit will be allowed for work done in secondary schools, or in any institution below the rank of a standard college, except upon examination. An exception to this rule will be made in the case of graduates from the advanced courses of the Minnesota State Normal Schools who will be given credit for a year of college work. They will be given provisional Sophomore standing, but will be conditioned in the required Freshman studies which they have not taken. In order to secure the year's credit the candidate must present a certificate signed by the President of the school, showing the studies pursued in the normal course.

REGISTRATION

The committee on registration will be in session at the Library on Monday and Tuesday, September 13 and 14, 1915 on Monday from 2 to 5 P. M. and on Tuesday from 9 A. M. to 12 M. and from 2 to 5 P. M. Students may complete their registration on either of these days. A registration fee of two dollars will be charged those enrolling after registration days.

Candidates for admission to the college are urged to meet the committee on Monday if possible. It will facilitate registration if the candidates will send their certificates to the Registrar before September 1.

REQUIREMENTS FOR GRADUATION

The degree of Bachelor of Arts or Bachelor of Science will be conferred upon a student who fulfills the conditions as to amount, grade and distribution of work stated under I, II, III, and IV below :

I. AMOUNT OF WORK.—A student must complete satisfactorily 120 semester hours of work, in addition to the required work in Physical Education (6 credits). A semester hour is defined as one hour of classroom work per week, or its equivalent, pursued for one semester.

The normal amount of work for a student is 15 hours a semester in addition to work in Physical Education; a minimum of 12 hours is required.

In beginning a language no credit will be given for less than a year's work.

Twenty-four hours after the Freshman year is the maximum credit allowed in any one department.

II. GRADE OF WORK.—A student must secure 120 grade credits. A student securing an "A" is given 3 grade credits for each hour so marked; a "B," two; and a "C," one. This requirement, therefore, means that an average of "C" must be maintained for the four year's work.

III. DISTRIBUTION OF WORK.

1. The student must conform to the requirements of the specific years of the course (see IV below).

2. The student must complete a major and two minors. A major is not less than eighteen hours, and a minor not less than twelve hours, in a single department. The major shall be chosen from one of the following groups of departments, and a minor from each of the other two.

I.	II.	III.
English	Bible	Astronomy
French	Economics	Biology
German	Education	Chemistry
Greek	History	Geology
Hebrew	Philosophy	Mathematics
Latin	Political Science	Physics
Spanish	Sociology	

3. Candidates for the B. A. degree may choose their major from any one of these three groups. Candidates for the B. S. degree must choose their major from Group III. Beginning with the class which will be graduated in June, 1917, candidates for the degree of B. S. will be required to secure eighteen hours credit in group III in addition to the major. These eighteen hours shall not be distributed over more than two departments, and shall be of the grade of major work in the several departments.

4. Choice of a major must be made before the end of the Sophomore year, and reported to the Registrar. The student shall consult the chairman of the department in which he wishes to pursue his major work, and shall secure his approval of the choice of major and his advice in regard to subsequent selection of courses. The choice of a major may not be changed unless special permission for such change has been granted by the President.

5. Each student shall choose, under the advice and subject to the approval of the instructor in charge of his major work, twelve hours additional to the major, of such a character as to support or reinforce the major. Courses counted toward a minor are not for that reason excluded from this list of supporting courses.

6. Candidates for the B. A. degree must have completed in secondary school and college a total of six years of work in foreign language, of which two years must be in Latin, and at least two years must be taken in college. Candidates for the B. S. degree must have completed in secondary school and college, a total of four years of work in foreign

language, of which at least two years must be taken in college.

Students planning to take up graduate work upon completion of their college course, should secure a reading knowledge of French and German as early as possible.

IV. REQUIREMENTS IN SPECIFIC YEARS.

Freshman Year

B. A. Course—

REQUIRED :

English
Language
Mathematics

ELECTIVE :

Bible
Biology
Chemistry
French
German
Greek
History
Latin
Public Speaking

B. S. Course—

REQUIRED :

English
Language
Mathematics

ELECTIVE :

Bible
Biology
Chemistry
French
German
Greek
History
Latin
Public Speaking

Candidates for the B. A. degree who present three units of mathematics for entrance may have an option between mathematics and ancient language in the requirements for the Freshman year. Of all other Freshmen a year of college mathematics is required. This for the first semester will be Higher Algebra or College Algebra according to previous preparation; for the second semester, Solid Geometry or Trigonometry.

Sophomore Year

B. A. Course—

REQUIRED :

Language
Psychology

B. S. Course—

REQUIRED :

Language
Two of the following:
Biology
Chemistry
Mathematics
Physics

Junior and Senior Years

The remaining courses of the Sophomore year and those of the Junior and Senior years are elective, subject to the requirements of the group system and to the sequence of courses within departments.

CLASSIFICATION

For participation in class contests, for chapel seating and for administration purposes in general, classification is determined at the beginning of the college year, according to the following plan: A student having secured at least eighteen hour-credits and eighteen grade-credits will be classified as a Sophomore; fifty-four hour-credits and fifty-four grade-credits will be classified as a Junior; and eighty-seven hour-credits and eighty-seven grade-credits will be classified as a Senior.

For publication in the annual catalog, classification is determined at the end of the first semester according to the following plan: A student having secured at least thirty hour-credits and thirty grade-credits will be classified as a Sophomore; sixty hour-credits and sixty grade-credits, a Junior; ninety hour-credits and ninety grade-credits, a Senior.

Courses of Instruction—1915-16

The following list of courses is offered for the year 1915-16. That students may be helped wisely to plan their elections, announcement is also made of certain courses to be first offered in 1916-17. The list of courses offered in 1914-15 is published in the bulletin to which this is a supplement.

Only courses numbered below 200 are open to Freshmen, and only those numbered below 300 are open to Sophomores. As a rule odd numbers are used for courses offered in the first semester, and even numbers for those offered in the second semester.

In general no credit or only part credit will be given for a year course unless the student continues the course throughout the year. Year courses are indicated by printing the two numbers together.

The number of hours credit indicates the number of hours for each semester.

ASTRONOMY

Prerequisites: Mathematics 103 and 104.

MAJOR.—Any course in astronomy may count toward a major or minor in the department of Mathematics and Astronomy.

MINOR.—Courses 301, 302, 303, and 304.

301. GENERAL ASTRONOMY.—A course in descriptive astronomy, with study of the apparatus in Goodsell Observatory and frequent evenings with the telescope.

Juniors, First Semester.—3 hours credit.

302. GENERAL ASTRONOMY.—A continuation of course 301.

Juniors, Second Semester.—3 hours credit.

303. PRACTICAL ASTRONOMY.—Open only to those who have taken courses 301 and 302. The student is instructed in methods of computing; problems involving the transformation of coördinates; the use of ephemerides; comparison of clocks; conversion of time; determination of clock errors with the transit instrument; and in the use of the equatorial telescope in connection with various problems. The majority of the clear evenings will be spent in observational work.

Seniors, First Semester.—3 hours credit.

304. PRACTICAL ASTRONOMY.—A continuation of course 303.
Seniors, Second Semester.—3 hours credit.
305. PRACTICAL ASTRONOMY.—A course in the theory and practice of measurement of stellar photographs.
Graduate Students, First Semester.—Credit dependent upon amount of work done by student.
306. PRACTICAL ASTRONOMY.—A course in the theory and practice of the computation of orbits.
Graduate Students, Second Semester.—3 hours credit.

BIBLICAL LITERATURE

MAJOR.—Six hours in Old Testament, six hours in New Testament, and six hours selected from courses in Hebrew, Missions, or History of Religion.

MINOR.—Three hours in Old Testament, three hours in New Testament, and six hours selected from courses in Hebrew, Missions, or History of Religion.

A.—Historical Courses.

OLD TESTAMENT.

- 105-106.—INTRODUCTION TO THE OLD TESTAMENT.—A general account of the Old Testament and its several books. Lectures and text-book; G. B. Gray, *Critical Introduction to the Old Testament*.
Freshmen and Sophomores, First and Second Semesters.—1 hour credit.
103. HEBREW HISTORY TO THE CONQUEST OF CANAAN.—The narratives of Genesis; the work of Moses and the rise of the Hebrew people; Canaan and its civilization; the occupation of the land.
Freshmen, First Semester.—2 hours credit.
104. FROM THE CONQUEST TO THE DIVISION OF THE KINGDOM.—Continuation of course 103.—The age of the Judges; Samuel and the rise of the monarchy; David, the organizer of the Hebrew state; Solomon, the founder of the state religion; the secession of Israel.
Freshmen, Second Semester.—2 hours credit.
201. FROM THE DIVISION OF THE KINGDOM TO THE RETURN UNDER CYRUS.—Period of Syrian influence; the House of Omri; Elijah and the Tyrian influence; the House of Jehu; the

decline and fall of Israel; Judah's entrance into world politics; the fall of Judah; the history of the Exiles, and of Palestine during the Captivity; the development of the religious ideal to 538 B. C.

Sophomores, First Semester.—2 hours credit.

203. THE RELIGION OF ISRAEL.—A sketch of the Ancient Hebrew religion from its beginnings, followed by a sketch of Jewish religion after the Exile. Lectures and text-book: J. P. Peters, *Religion of the Hebrew People*.

Sophomores, Juniors and Seniors, First Semester.—2 hours credit.

204. THE TEACHING OF THE PROPHETS.—With particular attention to the social teachings of the Hebrew prophets. Lectures and text-book: A. F. Kirkpatrick, *The Doctrine of the Prophets*.

Sophomores, Juniors and Seniors, Second Semester.—2 hours credit.

NEW TESTAMENT.

102. THE APOSTOLIC AGE.—The origin and spread of Christianity to the close of the New Testament period, with an account of the New Testament writings. Text-book: J. V. Bartlet, *The Apostolic Age*.

Freshmen and Sophomores, First Semester.—3 hours credit.

301. THE LIFE OF CHRIST.—A study of the sources for the life of Jesus; the Maçcabean Period; the Hellenistic influence. This will lead up to the study of the environment, life and teachings of Jesus; his relation to human life and the moral and spiritual order as found in the Gospel.

Juniors and Seniors, First Semester.—3 hours credit.

B.—History of Religion.

108. THE CHRISTIAN RELIGION.—A statement of its historical elements and of the evidences for the same. Lectures and text-book.

Freshmen and Sophomores, Second Semester.—3 hours credit.

221. INTRODUCTION TO THE HISTORY OF RELIGION.—The nature and growth of religious belief and worship. Text-book: Jevons' *Introduction to the History of Religion*, and lectures.

Sophomores, Juniors and Seniors, First Semester.—3 hours credit.

222. THE RELIGIONS OF THE ANCIENT SEMITIC WORLD.—A sketch of the religions of Egypt, the Semitic peoples, and Persia. Lectures and text-book: G. F. Moore, *The History of Religions*, Vol. 1.

Sophomores, Juniors and Seniors, Second Semester.—3 hours credit.

C.—*Missions.*

205. MISSIONS IN INDIA, CHINA AND JAPAN.—A detailed study of the educational, social and religious aspects of Christian missions in these lands. This will include a brief survey of the religions of these peoples.

Sophomores, First Semester.—3 hours credit.

206. MISSIONS IN MOHAMMEDAN LANDS AND AFRICA.—A study of Mohammed's life and the Koran, together with the present social and religious conditions in Mohammedan lands. This will be followed by a detailed study of missions in Africa.

Sophomores, Second Semester.—3 hours credit.

D.—*Hebrew Language.*

- 321-322. ELEMENTARY HEBREW.—A beginner's course, to prepare for the Old Testament courses of the Divinity curriculum. *Juniors and Seniors, First and Second Semesters.*—4 hours credit.

(Courses in Advanced Hebrew and other Semitic languages may be arranged for.)

BIOLOGY

MAJOR.—Students who major in this department are required to have an elementary knowledge of physics and chemistry, such as may be gained from the high school or beginning college courses. All courses in the department will be counted toward a major. Elections must be made in such a manner as to give a reasonable mastery of some particular phase of biology.

MINOR.—Altho all courses in the department will be counted toward a minor, students are required to elect courses in some logical sequence.

A.—*Zoology.*

- 101-102. THE PRINCIPLES OF ZOOLOGY.—An attempt is made to give to the beginner a broad view of the fundamental principles of life as applied to the animal kingdom. Hegner's text,

supplemented by lectures. Laboratory, invertebrates. Three hours class and two hours laboratory. Not open to those who have credit for course 317-318.

First and Second Semesters.—3 hours credit.

- 203-204. VERTEBRATE ZOOLOGY.—The comparative anatomy of vertebrates, both living and fossil, forms the chief subject matter of this course. From one to two hours class and four hours laboratory. Prerequisite course 102 or 318, except by special arrangement.

First and Second Semesters.—3 hours credit.

301. VERTEBRATE EMBRYOLOGY.—One hour class and four hours laboratory each week. Prerequisite, course 102 or 318. Recommended, course 204. Not offered in 1916-17.

First Semester.—3 hours credit.

302. VERTEBRATE EMBRYOLOGY.—A continuation of 301.

Second Semester.—3 hours credit.

305. GENERAL HISTOLOGY.—One hour class and four hours laboratory each week. Prerequisite, course 102 or 318. Recommended, course 204. Not offered in 1915-16.

First Semester.—3 hours credit.

306. GENERAL HISTOLOGY.—A continuation of course 305.

Second Semester.—3 hours credit.

B.—Botany.

- 103-104. GENERAL BOTANY.—A general view of the plant kingdom and its life processes. Open to Freshmen.

First and Second Semesters.—3 hours credit.

309. MICROBIOLOGY.—A study of bacteria, moulds, etc. Prerequisite, course 104 or 318.

First Semester.—3 hours credit.

310. FOREST BOTANY.—A consideration of some of the problems of forestry. Field, laboratory, and class. Prerequisite, course 104 or 318.

Second Semester.—3 hours credit.

311. TAXONOMY.—Prerequisite, course 104 or 318. Field, laboratory, and class.

First Semester.—3 hours credit.

312. ECOLOGY.—Field, laboratory, and class. Prerequisite, course 104 or 318. Recommended, 311.

Second Semester.—3 hours credit.

C.—General.

- 317-318. GENERAL BIOLOGY.—An effort is made to give in this course the fundamental laws of biology. The elements of general physiology are especially emphasized. Evolution and heredity are treated in a simple way. Illustrative material is drawn equally from the plant and animal kingdoms. A knowledge of elementary chemistry is demanded for this course. Three hours class and two hours laboratory each week. Open to Juniors and Seniors, who have no other credits in Biology. Not open to Freshmen and Sophomores.
First and Second Semesters.—3 hours credit.
201. EVOLUTION AND HEREDITY.—Three hours class work each week. No laboratory. Prerequisite, course 102, 104, or 318.
First Semester.—3 hours credit.
307. TECHNIQUE.—Methods of preparing gross and microscopic objects for study. One hour class and four hours laboratory each week. Prerequisite, course 103, 301, or 305.
First Semester.—3 hours credit.
308. TEACHERS' COURSE.—Elsewhere listed as Education 304. Prerequisite, 12 hours credit in Biology. Open to Seniors who expect to teach a biological subject.
Second Semester.—2 hours credit.
313. ADVANCED WORK.—Individual work of a nature not covered by regular courses may be elected upon permission from the chairman of the department. Prerequisite, such work as may be necessary.
First Semester.—Credit by arrangement.
314. ADVANCED WORK.—As announced for course 313.
Second Semester.—Credit by arrangement.
315. SEASIDE WORK.—Summer work done at the Marine Biological Laboratory at Woods Hole, Mass., or at similar institutions, will be credited under this course number. Credit according to work completed.

CHEMISTRY

MAJOR AND MINOR.—Courses 101 and 102 will not be counted toward a major or a minor, and courses 103 and 104 will not be counted toward a major when taken in the Freshman year.

- 101-102. AN INTRODUCTION TO INORGANIC CHEMISTRY.—Illustrated lectures and laboratory work. A large part of the labor-

atory time is devoted to quantitative experiments. It is the purpose of this course to develop the fundamental chemical laws and show the relation of chemical theory to those laws. Open to all students who have not had elementary chemistry. Three hours of class room and three hours of laboratory work a week.

First and Second Semesters.—3 hours credit.

- 103-104. GENERAL INORGANIC CHEMISTRY.—Text: Alexander Smith's *General Inorganic Chemistry*. The text is supplemented by lectures and class room experiments. The subject is developed in the light of modern theories. The work in the laboratory consists of advanced experiments, developing the general principles of chemistry. Open to students who have taken courses 101 and 102, or their equivalents. Three hours of class room and three hours of laboratory work a week.

First and Second Semesters.—3 hours credit.

- 201-202. QUALITATIVE ANALYSIS.—The course is developed in the light of ionic and mass actions, and the chemical basis of analytical methods receives special emphasis. Many commercial substances are analyzed and it is the aim that there shall be a thoro drill in all the important methods of analysis. Prerequisite, courses 103 and 104. One hour of class room and six hours of laboratory work a week.

First and Second Semesters.—3 hours credit.

301. QUANTITIVE ANALYSIS.—Talbot's *Quantitive Analysis* is used as a guide, and along with the gravimetric and volumetric work, electro-chemical analysis is carried thru the year. Prerequisite, courses 201 and 202. One hour of class room and six hours of laboratory work a week.

First Semester.—3 hours credit.

302. CONTINUATION OF COURSE 301.—One hour of class room and six hours of laboratory work a week.

Second Semester.—3 hours credit.

303. ORGANIC CHEMISTRY.—This course consists of lectures presenting the relations between the different classes of organic compounds, also the structural formulae and the evidences upon which they rest. The laboratory work will be devoted to the preparation of typical organic compounds, and the study of their properties. Open to students who

have taken courses 201 and 202. Three hours lectures and three hours laboratory per week.

First Semester.—3 hours credit.

304. CONTINUATION OF COURSE 303.—Three hours lectures and three hours laboratory per week.

Second Semester.—3 hours credit.

305. APPLIED CHEMISTRY.—This is an advanced course in quantitative analysis in which commercial methods of analysis receive special attention, such as agricultural analysis, food analysis, fuel analysis, gas analysis, iron and steel analysis and assaying. Prerequisite, courses 301 and 302. One hour of class room and six hours of laboratory work a week.

First Semester.—3 hours credit.

306. CONTINUATION OF COURSE 305.—One hour of class room and six hours of laboratory work a week.

Second Semester.—3 hours credit.

308. TEACHERS' COURSE.—Elsewhere listed as Education 306. Prerequisite, courses 201 and 202. One hour of class room and two hours of laboratory work a week. Open to Seniors.

Second Semester.—2 hours credit.

ECONOMICS AND POLITICAL SCIENCE

ECONOMICS.

MAJOR.—A major shall include courses 201 and 202. The work in Industrial and Social History of England or in Social Pathology may count as three hours towards a major.

MINOR.—A minor shall include courses 201-202.

- 201-202.—ECONOMICS.—Introductory Course. The nature and scope of economics, the characteristics of the present economic system and a brief survey of the evolution of economic society; a study of the principles and problems of economics, elementary concepts, and the four subdivisions—consumption, production, value and exchange, and distribution. Public industry and the relation of the state to private enterprise, public expenditures, public revenues; and a brief survey of the development of economic thought.

First and Second Semesters.—3 hours credit.

307. LABOR PROBLEMS.—The significance of organized labor, a brief history of the labor movement, trade-union methods, meth-

ods of promoting industrial peace; a special study of such problems as industrial remuneration, child labor, woman labor, the sweated industries, and some recent tendencies in the industrial world.

First Semester.—3 hours credit.

308. **SOCIALISM AND SOCIAL REFORM.**—The history, theory and present status of socialism; communism, anarchism, syndicalism; the life and works of some of the principal exponents of these various social theories; a general survey of the great social movement towards political and economic democracy in our own and in other countries.

Second Semester.—3 hours credit.

311. **FINANCIAL HISTORY OF THE UNITED STATES.**—Colonial financial legislation, the establishing of a national system, the United States banks, the independent treasury, and state banks; a study of the principal banking acts, currency measures, and tariff acts and panics.

First Semester.—3 hours credit.

312. **MONEY AND BANKING.**—The nature and functions of money, credit and the nature of credit transactions, the forms and issue of bank currency, the banking system of the United States and of the principal foreign countries, and the theory and history of bimetallism.

Second Semester.—3 hours credit.

315. **PUBLIC FINANCE.**—Public expenditures; public revenues; the development of taxation historically traced, excises and customs duties, property taxes and personal taxes; the growth and nature of public credit and public debts; and financial administration.

First Semester, 1916-17.—3 hours credit.

321. **PRACTICAL POLITICS.**—Seminar Course. A study of the workings of congress, of our state legislature, and of our municipal government; a study of men and measures. The Congressional Record, the various government publications, and periodical literature will be used as a basis for the work.

First Semester.—2 hours credit.

322. **ECONOMIC AND SOCIAL PROBLEMS.**—Research work and the use of original documents, the collecting of material and the preparation of special topics, the collecting of data for

debates and the preparing of bibliographies. The aim of this course is to familiarize the student with the government publications and other material available for the study of economic and social problems. The course will be conducted as a seminar in economics and political science.

Second Semester.—2 hours credit.

POLITICAL SCIENCE.

MAJOR.—Not offered.

MINOR.—Any course may be counted toward a minor.

201-202. AMERICAN GOVERNMENT AND POLITICS.—The colonial origins of American institutions; the evolution of the federal constitution, the state constitutions, and of political issues in the United States; the general features of the federal system of government, and of the state governments. State government; the constitutional basis of state government, the state executive department, the state legislature, and the state judicial system; the organization of municipal government, municipal functions; and social and economic legislation.

First and Second Semesters, 1916-17.—3 hours credit.

307-308. POLITICAL SCIENCE.—Introductory course. A general outline of political science, viewing the state from the standpoint of past development and present conditions; the nature, origin, evolution, and theories of the state; sovereignty, law, and the relation of state to state; the organization of government, separation and division of powers, political parties, local and colonial government, and the province and functions of government.

First and Second Semesters.—3 hours credit.

SEMINAR.—PRACTICAL POLITICS. See Economics 321-322.

EDUCATION

MAJOR.—Any course except the special teachers' courses will be counted toward a major.

MINOR.—Any course except the special teachers' courses will be counted toward a minor.

201. PSYCHOLOGY.—This course is prerequisite to all other courses in the department. It is also announced as Philosophy 201.

- Text-book, lectures and experimental work. Text-book: Pillsbury's *Essentials of Psychology*.
Sophomores, First Semester.—3 hours credit.
202. PSYCHOLOGICAL PRINCIPLES OF TEACHING.—An application of the principles and laws of psychology to teaching, with an examination of the tendencies in modern educational thought as to the aims, values, and essential content of education. Text-books: James' *Talks to Teachers*, Colvin's *Learning Process*, Dewey's *The School and Society*.
Sophomores, Second Semester.—3 hours credit.
301. HISTORY OF EDUCATION.—A survey of the educational theories and systems of the Greeks, Romans, and Middle Ages, with a more detailed study of the subject from the Renaissance to the present time. Text-book: Monroe's *History of Education*, with lectures and reports.
Juniors, First Semester.—3 hours credit.
330. EDUCATIONAL CLASSICS.—A critical study of some of the important contributions to the philosophy of education.
Juniors, Second Semester.—3 hours credit.
302. EDUCATIONAL ADMINISTRATION.—A study of the organization and administration of education in the United States, with special attention to the school system of Minnesota. Text-book: Dutton and Snedden's *Administration of Public Education in the United States*. A digest of the school laws of Minnesota is also studied.
Juniors, First Semester.—3 hours credit.
303. SECONDARY EDUCATION.—A course of special training for high school work. The aims, methods, and current problems of secondary education are discussed. By special arrangement with the Northfield High School, the members of the class devote two hours each week to observation of the high school work and practice teaching in the high school. Text-books: Brown's *The American High School*, Johnston's *High School Education*, supplementary readings, reports and discussions.
Seniors, First Semester.—3 hours credit.
304. TEACHERS' COURSE IN BIOLOGY.—This course is also announced as Biology 308.
Seniors, Second Semester.—2 hours credit.

306. TEACHERS' COURSE IN CHEMISTRY.—This course is also announced as Chemistry 308.
Seniors, Second Semester.—2 hours credit.
308. TEACHERS' COURSE IN ENGLISH.—This course is also announced as English 334.
Seniors, Second Semester.—2 hours credit.
310. TEACHERS' COURSE IN GERMAN.—This course is also announced as German 308.
Seniors, Second Semester.—2 hours credit.
312. TEACHERS' COURSE IN HISTORY.—This course is also announced as History 306.
Seniors, Second Semester, 1916-17.—2 hours credit.
314. TEACHERS' COURSE IN LATIN.—This course is also announced as Latin 302.
Seniors, Second Semester.—2 hours credit.
316. TEACHERS' COURSE IN MATHEMATICS.—This course is also announced as Mathematics 306.
Seniors, Second Semester.—2 hours credit.
- 317-318. TEACHERS' COURSE IN PHYSICAL EDUCATION. (MEN).—This course is also announced as Physical Education 303-304.
First and Second Semesters.—2 hours credit.
320. TEACHERS' COURSE IN PHYSICAL EDUCATION (WOMEN).—This course is also announced as Physical Education 303-304.
Second Semester.—2 hours credit.
322. TEACHERS' COURSE IN PHYSICS.—This course is also announced as Physics 312.
Second Semester.—2 hours credit.

ENGLISH AND PUBLIC SPEAKING

REQUIREMENT.—English 101-102 is required of all candidates for a degree. Students who make unsatisfactory grades in this course are held for further work in English at the discretion of the department.

All courses except course 101-102 in English and the courses in Public Speaking will be counted toward a major or minor.

A.—English.

- 101-102. FRESHMAN COMPOSITION.—The elements of effective writing based upon study of selected authors, with practice in

various forms of composition. Frequent conferences with the instructor. Collateral reading.

First and Second Semesters.—3 hours credit.

201. NEWSPAPER WRITING.—An elementary course providing instruction and practice in the details of the work of the newspaper reporter, including news gathering and newspaper writing.

First Semester.—3 hours credit.

211. COMPOSITION AND LITERATURE.—A course combining practice in writing with study of literary prose of the eighteenth and nineteenth centuries. It is designed especially for students who desire a second course in composition but who do not care to take the more advanced course.

First Semester.—3 hours credit.

- 213-214. INTRODUCTION TO ENGLISH LITERATURE.—An introductory course in English literature, the aim of which is to enable the student to find some basis for a genuine appreciation of literature. Attention is given to the development of English prose and poetry, and to the principal types of literature, such as epic, lyric, drama, essay, novel, etc.

First and Second Semesters.—3 hours credit.

216. AMERICAN LITERATURE.—A study of the formative influences in the development of the literature of America from the colonial period to the present time. The literature is considered in its relations to the underlying social and economic conditions, and to the literature of England. Given in 1915-16 and in alternate years.

Second Semester.—3 hours credit.

- 301-302. ADVANCED COMPOSITION.—Practice in writing, with brief studies of various types, such as the editorial, the essay, and the short narrative sketch. Attention is given to the technique and the style of the short story. Frequent conferences with the instructor. Collateral reading.

First and Second Semesters.—3 hours credit.

- 303-304. NEWSPAPER WRITING.—An advanced course, open only to members of the staff of *The Carletonia*, and of the Carleton Press Bureau. Course 201 is prerequisite.

First and Second Semesters.—1 hour credit.

- 311-312. ANGLO-SAXON.—A careful study of the Anglo-Saxon language and a brief survey of the literature. Representa-

tive selections of Anglo-Saxon prose and verse are read, including *Béowulf*, which is studied as a monument of both the literature and life of the period. Given in 1915-16 and in alternate years.

First and Second Semesters.—3 hours credit.

- 313-314. CHAUCER AND MIDDLE ENGLISH.—An introductory course for students who have had no training in Middle English. Chaucer's Prologue is read, and some of the Canterbury Tales and minor poems; also a considerable amount of Middle English literature of the fourteenth and fifteenth centuries. Given in 1914-15 and in alternate years.

First and Second Semesters.—3 hours credit.

- 315-316. SHAKSPERE.—A critical study of five of Shakspeare's plays: *Macbeth*, *I Henry IV*, *King Lear*, *Twelfth Night*, and *The Winter's Tale*. Collateral reading.

First and Second Semesters.—3 hours credit.

- 317-318. ELIZABETHAN DRAMA.—A study of the English drama from its origin to 1642. The main emphasis is placed upon Shakspeare, who is studied in his relation to other dramatists of the period and with reference to his own development as poet and dramatist. Specimens of miracle plays, moralities, and interludes are read, and representative plays of the leading dramatists. Given in 1914-15 and in alternate years.

First and Second Semesters.—3 hours credit.

319. SPENSER AND MILTON.—A study of non-dramatic English literature of the sixteenth and seventeenth centuries, with special attention to Spenser and Milton. Given in 1915-16 and in alternate years.

First Semester.—3 hours credit.

- 321-322. THE ROMANTIC MOVEMENT.—A study of the various phases of the Romantic Movement as manifested in English literature from Thomson to Keats, with especial emphasis upon Wordsworth. Attention is given to the interrelations of the literatures of England, Germany, and France during the period in question. Given in 1915-16 and in alternate years.

First and Second Semesters.—3 hours credit.

323. VICTORIAN POETRY.—A study of the chief poets of the Victorian period: Tennyson, Mrs. Browning, Browning, Ar-

nold, Clough, Rossetti, Morris, and Swinburne. Given in 1914-15 and in alternate years.

First Semester.—3 hours credit.

324. VICTORIAN PROSE.—A study of the leading characteristics and tendencies of the Victorian period as represented in the prose works of Carlyle, Newman, Ruskin, and Arnold. Given in 1914-15 and in alternate years.

Second Semester.—3 hours credit.

325. LITERARY CRITICISM.—A study of theories and principles of literary criticism, with practice in critical writing. Some time is devoted to a study of selected critical essays from modern prose writers. Given in 1914-15 and in alternate years.

First Semester.—3 hours credit.

328. THE ENGLISH NOVEL.—A study of the history and technique of the English novel from its beginning to the present time. Attention is given to the prevailing types of fiction in European literature of the eighteenth and nineteenth centuries, and to various social and economic movements reflected in the type of literature discussed. Given in 1915-16 and in alternate years.

Second Semester.—3 hours credit.

334. TEACHERS' COURSE.—Elsewhere listed as Education 308. A study of the aim and plan of the high school course in English, with consideration of texts and of the methods of instruction. Representative classics are studied in some detail. Open to Seniors who expect to teach English in high school.

Second Semester.—2 hours credit.

B.—Public Speaking.

- 101-102. ELEMENTARY PUBLIC SPEAKING.—Study and practice in the effective delivery of literary masterpieces, with especial attention to voice training.

First and Second Semesters.—2 hours credit.

- 201-202. LITERARY INTERPRETATION.—Study and practice in the effective delivery of narrative, lyric, and dramatic literature, with especial attention to Shakspeare and to modern drama.

First and Second Semesters.—3 hours credit.

203. EXTEMPORANEOUS SPEAKING.—Study and practice in the presentation of various forms of public address, with especial attention to the preparation and delivery of extemporaneous speeches upon topics of the day.
First Semester.—3 hours credit.
204. ARGUMENTATION AND DEBATE.—A careful study of the principles of argumentation, including analysis and brief drawing, with much practice in debating.
Second Semester.—3 hours credit.
301. THE ORATION.—A study of the lives and speeches of a number of great orators, accompanied with practice in writing and delivering orations.
First Semester.—3 hours credit.
302. INTERCOLLEGIATE DEBATE AND ORATORY.—A course providing training for students who represent the College in intercollegiate debates or oratorical contests. Bibliographies and speeches, typewritten and bound, are to be deposited in the library.
Second Semester.—3 hours credit.
304. INTERCOLLEGIATE DEBATE AND ORATORY.—A continuation of course 302. Not more than six hours credit may be earned in these two courses.
Second Semester.—3 hours credit.
- 305-306. ACTING DRAMA.—A course providing training for public presentation of plays under the auspices of the College.
First and Second Semesters.—1 or 2 hours credit.
- 307-308. ACTING DRAMA.—A continuation of course 305-306. Not more than four hours credit may be earned in these two courses.
First and Second Semesters.—1 or 2 hours credit.

GEOLOGY

The geological museum, housed at present in Williams Hall, contains a good collection of mineral, rocks, and fossils. Students are expected to make themselves acquainted with the principal groups of these.

201. THE PRINCIPLES OF DYNAMICAL AND STRUCTURAL GEOLOGY,—
Recitations, laboratory and field work.
First Semester.—3 hours credit.

202. HISTORICAL GEOLOGY.—The elements of stratigraphy and paleontology. Recitations and museum work.

Second Semester.—3 hours credit.

The field courses in Geography of the University of Minnesota, listed as 188s, in its catalog, are open to Carleton students and may be taken for college credit under the direction of the department of Geology.

GERMAN

MAJOR.—Any course will be counted toward a major with the exception of courses 101 and 102.

MINOR.—Any course will be counted toward a minor, but courses 101 and 102 will count for only two hours each.

Courses 101 and 102 and courses 201 and 202 should not be divided.

- 101-102. ELEMENTARY GERMAN.—This course is for those students who have had no German.

First and Second Semesters.—4 hours credit.

- 201-202. INTERMEDIATE GERMAN.—This course is intended for those students who have had two years of German in high school, or one year in college.

First and Second Semesters.—3 hours credit.

203. HISTORY OF GERMAN LITERATURE.—This course is a general survey of the field of German literature and should precede any of the more special courses.

First Semester.—3 hours credit.

204. LESSING.—Two or three of the most important works of this author will be read. Some attention will be given to the development of German literature immediately before and after Lessing.

Second Semester.—3 hours credit.

301. GERMAN DRAMA.—Reading of selected dramas of the eighteenth and nineteenth centuries. Collateral reading on the lives and times of the authors read.

First Semester.—3 hours credit.

302. GERMAN DRAMA.—Continuation of course 301.

Second Semester.—3 hours credit.

303. SCHILLER.—Wallenstein and some other of Schiller's works

not previously read by the class. A biography of Schiller will be studied.

First Semester.—3 hours credit.

304. GOETHE.—Faust, Part I, will be studied in detail and outlines of Part II given in lectures. A biography of Goethe will be studied.

Second Semester.—3 hours credit.

305. HISTORICAL AND SCIENTIFIC GERMAN.—This course is intended especially for those Seniors who plan to do graduate work and will need a working knowledge of the language for this purpose. The kind of reading done will depend upon the special needs of the class.

First Semester.—3 hours credit.

306. CONVERSATION AND COMPOSITION.—This course is intended for those who expect to teach German, and will give practice in speaking and writing. It will be conducted in German. Consent of the instructor must be obtained.

Second Semester.—2 hours credit.

308. TEACHERS' COURSE.—Elsewhere listed as Education 310. This course will be more practical than theoretical. It will include a practical study of various methods of teaching. The class will be limited in size and practice teaching will be provided.

Second Semester.—2 hours credit.

310. HISTORY OF GERMANY.—This course is also announced as History 304.

Second Semester.—3 hours credit.

GREEK

REQUIREMENTS.—Candidates for the B. A. degree entering with three units of mathematics have the option of an alternate requirement between mathematics and an ancient language.

MAJOR.—A major in Greek shall include 201-202; 301-302; 351, and such other courses above 200 as shall make a total of eighteen hours.

MINOR.—A minor shall consist of 101-102; 201-202.

Courses 231-232 are open to all students without any prerequisite Greek.

101. ELEMENTARY GREEK.—The essentials of grammar. Xenophon begun. No credit unless followed by 102.
First Semester.—4 hours credit.
102. XENOPHON.—The Anabasis, Books I-II. The emphasis is laid upon forms and constructions.
Second Semester.—4 hours credit.
201. XENOPHON.—The Anabasis continued. HOMER, Iliad.
First Semester.—3 hours credit.
202. HOMER.—Iliad and Odyssey. The emphasis is placed upon the poetic qualities and the significance of Homer in the world's literary history.
Second Semester.—3 hours credit.
231. GREEK LITERATURE (in English translations).—The origin and development of the main departments of literature with illustrations from Homer, the Greek dramatists, etc.
First Semester.—2 hours credit.
232. GREEK AND ROMAN MYTHOLOGY.—Origins, development, and influence on subsequent literature, including English.
Second Semester.—2 hours credit.
301. HERODOTUS.—Selected portions will be read rapidly. LYSIAS. Selected orations. Introduction to Attic oratory.
First Semester.—3 hours credit.
302. PLATO.—The Apology and Crito. Introduction to Greek philosophy.
Second Semester.—3 hours credit.
351. DEMOSTHENES.—On the Crown. ARISTOPHANES. The Clouds.
First Semester.—3 hours credit.
352. GREEK DRAMA.—Prometheus Bound of Aeschylus and Antigone of Sophocles.
Second Semester.—3 hours credit.

HISTORY

All courses will be counted toward a major or minor.

101. MEDIEVAL HISTORY.—A general survey of the History of Continental Europe from the Germanic migrations to the beginning of the fourteenth century.
Freshmen, First Semester.—3 hours credit.
102. MODERN EUROPEAN HISTORY.—A continuation of course 101, the History of Continental Europe from the beginning of the fourteenth century to the present time, with special atten-

tion to the great movements that helped to produce the present conditions in Europe.

Freshmen, Second Semester.—3 hours credit.

201. AMERICAN COLONIAL HISTORY.—This course begins with the European backgrounds, traces the founding and development of colonies in America, and closes with a brief survey of the revolutionary period.

Sophomores, First Semester, 1915-16.—3 hours credit.

202. POLITICAL HISTORY OF THE UNITED STATES.—Beginning at the close of the American Revolution, the significant political and constitutional events are treated with reference to their bearing on American conditions and problems of the present time.

Sophomores, Second Semester, 1915-16.—3 hours credit.

203. INDUSTRIAL AND SOCIAL HISTORY OF ENGLAND.—The early life of the people, social customs and methods in industry, the industrial revolution and the development of present industrial and social conditions.

Sophomores and Juniors, First Semester, 1916-17.—3 hours credit.

204. INDUSTRIAL AND SOCIAL HISTORY OF THE UNITED STATES.—The business aspects of colonization, the industrial development under British control, and the great epochs in American history treated primarily from their industrial and social aspects.

Sophomores and Juniors, Second Semester, 1916-17.—3 hours credit.

301. ENGLISH POLITICAL HISTORY.—A History of England from pre-historic times to the present, with reference to political affairs, and with some attention to the development of the English constitution.

Juniors and Seniors, First Semester, 1915-16.—3 hours credit.

302. EUROPE IN THE NINETEENTH CENTURY.—The political, social, and economic development of Europe in the last hundred years is traced after the readjustments that followed the Napoleonic wars. The general aim is to lead the student to a better appreciation of the principal issues and problems that confront our age.

Juniors and Seniors, Second Semester, 1915-16.—3 hours credit.

303. ENGLISH CONSTITUTIONAL HISTORY.—The various phases of English history will receive attention only where they help to explain the constitution. Some previous study of English history is presupposed.
Juniors and Seniors, First Semester, 1916-17.—3 hours credit.
304. GERMAN HISTORY.—A history of Germany from the earliest settlement to the present time, with special reference to the social and industrial conditions and the growth of German institutions.
Juniors and Seniors, First Semester, 1915-16.—3 hours credit.
305. THE AMERICAN REVOLUTION.—An intensive study of the second half of the eighteenth century in American history, with the emphasis on political and constitutional results rather than on military events. The origin and the interpretation of the Declaration of Independence will receive special attention in this course.
Juniors and Seniors, First Semester, 1916-17.—3 hours credit.
306. TEACHERS' COURSE.—Elsewhere listed as Education 312. A study of methods of teaching history, with special reference to the needs of teachers in the secondary schools. Lectures and assigned readings on the nature and scope of courses; examinations and use of suitable text-books; discussion of problems connected with collateral readings, use and abuse of sources, map study, correlation, etc. Theories will be tested by practice wherever possible.
Seniors, Second Semester, 1916-17.—2 hours credit.

LATIN

All candidates for the B. A. degree who have not presented two units of Latin for admission are required to take Latin 11-12 and 21-22. These courses should be taken in the Freshman and Sophomore years. Students who enter with four units of Latin or have completed courses 11-12, 21-22 and 31-32 are admitted to Latin 101. Candidates for the B. A. degree entering with three units of mathematics have the option of an alternate requirement between mathematics and an ancient language.

MAJOR.—A major in Latin shall include 101-102 and 201-202. Courses below 101 may not count on a major.

MINOR.—A minor shall include 101-102 and six hours above 200.

- 11-12. LATIN GRAMMAR, CAESAR AND SELECTED READINGS.—For those who begin Latin in college.
First and Second Semesters.—4 hours credit.
- 21-22. CAESAR, SELECTED READINGS AND CICERO.—Continuation of Course 11-12.
First and Second Semesters.—4 hours credit.
- 31-32. VERGIL.—Six books of the Aeneid are read. While syntax is not neglected more attention is now given to the literary qualities.
First and Second Semesters.—3 hours credit.
101. CICERO AND LIVY.—Cicero, *De Senectute* or *De Amicitia*; Livy, *Selections*.
First Semester.—3 hours credit.
102. HORACE.—Odes and Epodes. Careful attention is given to the meters and literary qualities of Horace.
Second Semester.—3 hours credit.
- 111-112. LATIN COMPOSITION.—Translation into Latin of connected passages.
First and Second Semesters.—1 hour credit.
201. THE ROMAN DRAMA.—Plautus, Terence and Seneca. Study of one or more plays of each author and of the origin and development of the drama and its subsequent influence.
First Semester.—3 hours credit.
202. TACITUS AND PLINY.—Tacitus, *Agricola* and *Germania*. Pliny, *Selected letters*. A study is made of the style of these authors and of the characteristics of the Silver Latinity.
Second Semester.—3 hours credit.
211. THE HISTORY OF LATIN LITERATURE.—Lectures, assigned readings, papers.
First Semester.—1 hour credit.
212. ROMAN LIFE.—The course will include such topics as: The family, house, dress, amusements, food, sources of income and travel.
Second Semester.—1 hour credit.
301. CAESAR, CICERO, VERGIL.—Advanced course in the authors usually read in secondary schools, designed for supplementing and reinforcing the knowledge already possessed by the students, and recommended to those expecting to teach.
First Semester.—2 hours credit.

302. TEACHERS' COURSE.—Elsewhere listed as Education 314. Designed especially for those who expect to teach Latin. The practical problems of the teaching of secondary Latin are discussed and applied. Portions of Caesar, Cicero and Vergil are reviewed.
Second Semester.—2 hours credit.
321. CICERO.—Selected letters, studied from the standpoint of style, politics and personality.
First Semester.—2 hours credit.
322. ROMAN SATIRE.—Horace, Juvenal.
Second Semester.—2 hours credit.
333. CATULLUS, TIBULLUS, PROPERTIUS.
First Semester.—3 hours credit.
341. LUCRETIVS.—De Rerum Natura. Books I, III and V. Aside from the interpretation of the text, some attention will be given to the philosophy represented by Lucretius and its sources and development.
Second Semester.—3 hours credit.

MATHEMATICS

REQUIREMENTS.—All students except those who avail themselves of the option between ancient languages and mathematics are required to take one year of mathematics beyond their high school credits.

Courses 103 and 104 will be counted toward major and minor requirements only in those cases in which 101 and 102 are also taken in college. All courses after 104 will be counted toward major and minor requirements.

A major in mathematics shall include courses 201, 202, 203 and 204.

101. HIGHER ALGEBRA.—For those not having an entrance credit in this subject.
First Semester.—4 hours credit.
102. SOLID GEOMETRY.—For those not having an entrance credit in this subject.
Second Semester.—4 hours credit.
103. COLLEGE ALGEBRA.—For those presenting entrance credits in higher algebra. Review of quadratics, graphical representation, mathematical induction, the progressions, permutations,

complex numbers, theory of equations, logarithms, determinants.

First Semester.—4 hours credit.

104. TRIGONOMETRY.—Plane and spherical.

Second Semester.—4 hours credit.

- 201-202. ANALYTIC GEOMETRY.

First and Second Semesters.—3 hours credit.

203. DIFFERENTIAL CALCULUS.—Courses 203 and 204 cannot be taken without courses 201 and 202, but may be taken at the same time with them.

First Semester.—3 hours credit.

204. INTEGRAL CALCULUS.

Second Semester.—3 hours credit.

301. DIFFERENTIAL CALCULUS.—Second year.

First Semester.—3 hours credit.

302. INTEGRAL CALCULUS.—Second year.

Second Semester.—3 hours credit.

303. SELECTED SUBJECTS IN ALGEBRA AND TRIGONOMETRY.

First Semester.—2 hours credit.

304. SURVEYING.—Three hours a week classroom work during the first half of the semester. Six hours a week field and office work during the second half of the semester.

Second Semester.—3 hours credit.

305. HISTORY OF MATHEMATICS.

First Semester.—3 hours credit.

306. TEACHERS' COURSE.—Elsewhere listed as Education 316.

Second Semester.—2 hours credit.

307. THEORY OF EQUATIONS.

First Semester.—3 hours credit.

308. DIFFERENTIAL EQUATIONS.

Second Semester.—3 hours credit.

309. ADVANCED TRIGONOMETRY.—Open only to those who have taken all courses in mathematics up to and including 302.

Graduate Students, First Semester.—3 hours credit.

310. SOLID ANALYTICAL GEOMETRY.

Graduate Students, Second Semester.—2 hours credit.

MUSIC

Courses in theory, musical history and public school music are open as electives to college students who have sufficient musical prep-

aration to profit by them. The courses in theory, musical history, public school music and membership in the College Choir or College Band will be counted toward graduation hours. For description of these courses and their respective credits see pages 45-47.

PHILOSOPHY

REQUIREMENT.—Philosophy 201 is required in the Sophomore year of candidates for the B. A. degree.

MAJOR.—Any of the courses of the department will be counted toward a major.

MINOR.—Any of the courses of the department will be counted toward a minor.

201. PSYCHOLOGY.—An elementary course in general psychology, beginning with the structure and biological function of the nervous system and formulating the laws of mental growth and action. Text-book: Pillsbury's *Essentials of Psychology. Sophomores, First Semester*.—3 hours credit.
202. SOCIAL PSYCHOLOGY.—A study of mental growth and action as shown in social relationships. With this end in view the instincts, sentiments and growth of self-conscious action are taken up. Further topics dealt with are the group mind, suggestibility, imitation, invention, etc. Text-books: McDougall's *Social Psychology*, Wallas' *The Great Society. Sophomores, Second Semester*.—3 hours credit.
204. LOGIC.—A study of the principles and methods of inductive and deductive reasoning, with special emphasis on the working out of practical exercises. Text-book: Creighton's *Introduction to Logic. Sophomores, Second Semester*.—3 hours credit.
301. HISTORY OF PHILOSOPHY (to Kant).—A foundation course in philosophy, with special emphasis upon the development of philosophy to Kant. Text-book: Rogers' *History of Philosophy. Juniors, First Semester*.—3 hours credit.
302. HISTORY OF PHILOSOPHY (since Kant).—A continuation of course 301, giving special attention to Kant, Hegel, Spencer, and present-day philosophical movements. Text-book: Royce's *Spirit of Modern Philosophy*, James' *Will to Believe and Pragmatism. Juniors, Second Semester*.—3 hours credit.

303. ETHICS.—A study of the principles of moral judgment. Text-books: Dewey and Tufts' *Ethics* and Royce's *Philosophy of Loyalty*. Prerequisite, course 201.
Seniors, First Semester.—3 hours credit.
304. PHILOSOPHY OF RELIGION.—A study of the philosophical grounds of theism and of the psychological principles of religion leading to a critical valuation of religious systems. Text-books: Royce's *The Religious Aspect of Philosophy*, James' *Varieties of Religious Experience*.
Seniors, Second Semester.—3 hours credit.
309. SOCIAL PHILOSOPHY.—A study of the physical, biological, psychological, and sociological conditions which underlie social development, and an evaluation of the ideals which are implied in social progress. Text-book: Urwick, *A Philosophy of Social Progress*. Lectures, readings, and discussions.
Seniors, First Semester.—3 hours credit.
306. PRESENT PHILOSOPHICAL TENDENCIES.—The typical tendencies of the day, including materialism, idealism, positivism, and pluralism, will be surveyed and an attempt at a constructive view of the fundamental problems of reality will be made. Among such problems the conception of evolution, nature, mind, causality, etc., will be taken up. Readings, lectures, and discussions.
Seniors, Second Semester.—3 hours credit.
311. METAPHYSICS.—A course for students who have already taken Philosophy 301 and 302, taking up a critical study of some of the great philosophers or of some topic to be chosen by the class. In the year 1915-16 the subject will be English Philosophy in the eighteenth and nineteenth centuries.
Seniors, First Semester.—3 hours credit.
312. PHILOSOPHY OF THE STATE.—An examination of the typical philosophical theories of the state. Readings, lectures, and discussions.
Seniors, Second Semester.—3 hours credit.

PHYSICAL EDUCATION

COURSES FOR MEN.

Six credits are required of all students before graduation.

An examination, including measurements, strength tests, and a careful examination of the vital organs and the sense organs is re-

quired of every student on entering college, and is given each semester thereafter. Those unable to take the regular courses because of physical disability will be given special work.

Teams for intercollegiate competition in football, baseball, basketball, track and field athletics, tennis, indoor track athletics, cross country running and gymnastics are formed each year. Students are given credit for participation in athletics and gymnastics during these respective team seasons. In addition, inter-class competition in these various branches is held each season.

101. Twelve lectures on "Personal Hygiene." Marching tactics. Graded mass drills. Apparatus work: mass work and graded work in squads. Gymnastic games. One hour a week in either wrestling, aquatics, advanced apparatus work or indoor track work. Swimming: each student is required to learn to swim. Out-of-door work: when weather permits. (3 hours).

First Semester.—1 credit.

102. Floor work: continuation of the work of the previous semester. Swimming: each student is required to learn to swim with more than one variety of stroke. Out-of-door work: when weather permits. (3 hours).

Second Semester.—1 credit.

201. Marching evolutions. Graded mass drills. Apparatus work: mass work and graded exercises for squads. Gymnastic games. One hour a week in either wrestling, fencing, boxing, aquatics, advanced apparatus work or indoor track athletics. Swimming: each student is required to develop endurance in swimming. Out-of-door work: when weather permits. (3 hours).

202. Floor work: continuation of work of previous semester. Swimming: 100 yard swimming test. Out-of-door work: when weather permits. (3 hours).

Second Semester.—1 credit.

301. Graded mass drills and apparatus work. Group games and contests. One hour a week in either wrestling, fencing, boxing, aquatics, advanced apparatus work or indoor track athletics. Swimming: diving, rescue and resuscitation of drowning. Out-of-door work: when weather permits. (3 hours).

First Semester.—1 credit.

302. Continuation of course 301. (3 hours).
Second Semester.—1 credit.
303. Teachers' course. Elsewhere listed as Education 317-318. History and systems of physical education. Philosophy of physical training. Anthropometry, physical diagnosis and prescription of exercise. Theory and practice of teaching gymnastics. Prerequisite, Biology 101. (2 hours).
First Semester.—2 hours credit.
304. Continuation of course 303. Normal practice. Coaching of athletics. (2 hours).
Second Semester.—2 hours credit.
305. Teachers' Course. Advanced normal practice. Prerequisite, courses 303 and 304.
First Semester.—2 hours credit.
306. Continuation of Course 305.
Second Semester.—2 hours credit.

COURSES FOR WOMEN.

Six credits are required of all students before graduation.

Upon entrance, each young woman is given a physical examination to ascertain her physical efficiency, general condition and individual needs. If disabilities exist, special corrective work is arranged. One hour each week during the Freshman and Sophomore years is devoted to the study of personal hygiene by means of lectures and discussions.

101. Hygiene lecture (1 hour). Out door activities as long as weather permits, such as tennis, baseball, group games and organized walking; general gymnastic exercises, wand drills, dumb-bell drills, breathing and relaxing exercises, poise work, games and fancy steps. (2 hours).
First Semester.—1 credit.
102. Continuation of Course 101. (3 hours).
Second Semester.—1 credit.
201. Hygiene lecture (1 hour). Out door activities as long as weather permits, such as tennis, baseball, group games and organized walking. Marching tactics, general gymnastic exercises, corrective exercises for obtaining better posture, bar bell drills, games, folk and aesthetic dancing and fancy steps. (2 hours).
First Semester.—1 credit.

202. Continuation of Course 201. (3 hours).
Second Semester.—1 credit.
301. Advanced work in general gymnastics. Rhythmical exercises, balance and posture training exercises, folk and aesthetic dancing and games. (2 hours).
First Semester.—1 credit.
302. Continuation of Course 301. (2 hours).
Second Semester.—1 credit.
- 303-304. Teachers' Course. Also listed as Education 320. History and systems of physical training. Available materials, theory and practice of teaching.
 Beginning November first and continuing for eighteen weeks, counting as 1 hour for each semester.—2 hours credit.

PHYSICS

MAJOR.—Courses 203-204, or 201-202 and 205, together with nine hours of advanced physics and the prerequisite mathematics, shall constitute a major in this department.

MINOR.—Courses 203-204, or 201-202 and 205, together with three hours of advanced physics and the prerequisite mathematics, shall count as a minor.

- 201-202. GENERAL PHYSICS.—An introductory course intended primarily for arts students and those science students who desire a year of physics merely as a supplement to their other courses. The emphasis is laid upon the physical meaning of the principles, and the use of mathematics is reduced as much as possible for a course of college grade. Three hours of class room work and one two-hour laboratory period a week. Text-book: Kimball's *College Physics*.
First and Second Semesters.—3 hours credit.
203. MECHANICS AND HEAT.—A general course for students who expect to do advanced work in physics, chemistry or astronomy. It is also adapted to the needs of men who plan to take up engineering. Three hours recitation and two two-hour laboratory periods a week. Demonstration lectures are given occasionally. Text-book: Spinney's *Text-Book of Physics*. Prerequisite, analytical geometry, which may be taken at the same time.
First Semester.—4 hours credit.

204. MAGNETISM, ELECTRICITY AND LIGHT.—A continuation of course 203. Prerequisite, course 203.
Second Semester.—4 hours credit.
205. LABORATORY PHYSICS.—A course designed especially in order to make it possible for students, having credit in Physics 201 and 202, to obtain the additional training in general physics necessary for registration in advanced courses in this department. Two two-hour laboratory periods a week. Prerequisite, courses 201, 202 and analytical geometry. Not open to students taking courses 203 and 204.
First Semester.—2 hours credit.
307. ELECTRIC MACHINERY.—DIRECT CURRENT.—Beginning with a review of Ohm's law and electro-magnetic induction, this course includes the elementary theory of dynamo-electric machinery, together with laboratory work in self-induction; hysteresis of iron; efficiency, characteristic curves, etc., of direct current dynamos; and the calibration of measuring instruments. Text-book: Franklin and Esty, *Dynamos and Motors*. Laboratory manual: Swenson and Frankenfield, *The Testing of Electro-Magnetic Machinery*. Prerequisite, courses 203 and 204, or 201, 202 and 205. Calculus is advised. Class room work two hours a week and one three-hour laboratory period.
First Semester.—3 hours credit.
308. ELECTRIC MACHINERY.—ALTERNATING CURRENT.—A brief study of A. C. measuring instruments, alternators, polyphase systems, transformers, induction motors, etc., with laboratory work once a week. A continuation of course 307.
Second Semester.—3 hours credit.
309. MECHANICS.—An advanced course, including both statics and dynamics. It is recommended to students interested in pure physics, astronomy, applied mathematics, or engineering. Text-book: Jean's *Theoretical Mechanics*. Prerequisite, Physics 203-204 or 201-202 and 205 and calculus. (Alternates with course 311).
First Semester, 1915-16.—3 hours credit.
311. THEORY OF HEAT.—The subject matter in this course is chosen with especial reference to the needs of advanced students in physics and physical chemistry, and those contemplating the pursuit of mechanical engineering. The principles of

thermo-dynamics are studied and some time is devoted to their application to steam engines and turbines. Text-book: Edser's *Heat for Advanced Students*. Prerequisite, Physics 203 and 204, or 201, 202, 205, and Calculus. (Alternates with course 309).

First Semester, 1916-17.—3 hours credit.

312. TEACHERS' COURSE.—Also listed as Education 322. A course for Seniors who expect to teach physics in the secondary schools. One hour lecture and one discussion period a week. *The Teaching of Physics* by Mann is read and discussed; also articles in current school journals. An effort is made to furnish the beginning teacher with practical suggestions which will save him time and, possibly, help him over some of his difficulties in conducting a laboratory course. Occasional meetings are held in the laboratory in order to give the class a first hand knowledge of standard types of apparatus and to try out suggestions regarding certain experiments.

Second Semester.—2 hours credit.

ROMANCE LANGUAGES

French

MAJOR.—Any course except courses 101 and 102 will be counted toward a major.

MINOR.—Any course will be counted toward a minor, but courses 101 and 102 will count for only two hours each.

- 101-102. BEGINNERS' COURSE.—*Beginners' French*, Walter and Ballard; study of irregular verbs, easy reading.

First and Second Semesters.—4 hours credit.

201. MODERN FRENCH PROSE.—Short stories. Comedies. Grammar review.

First Semester.—3 hours credit.

202. Continuation of course 201, with composition.

Second Semester.—3 hours credit.

301. CLASSICAL LITERATURE.—Lectures on the history of literature in the seventeenth century. Readings from Boileau, La Fontaine, Mme. de Sévigné and others. Composition.

First Semester.—3 hours credit.

302. ROMANTIC LITERATURE.—Lectures on the literary revival of the early nineteenth century. Readings in Hugo, Balzac and other authors of the period.
Second Semester.—3 hours a week.
305. THEATRE OF THE SEVENTEENTH CENTURY.—Study of plays by Corneille, Racine, Molière.
First Semester.—3 hours a week.
306. SCIENTIFIC FRENCH.—A course planned especially for those who intend to do graduate work in scientific lines.
Second Semester.—2 hours a week.
307. EIGHTEENTH CENTURY.—The greater masterpieces of Voltaire, Montesquieu and others.
First Semester.—2 hours a week.
308. MODERN FRENCH POETRY.—Lectures, selected readings, declamations and reports. Prerequisite, course 305.
Second Semester.—3 hours a week.
309. A GENERAL SURVEY OF FRENCH LITERATURE FROM THE BEGINNINGS TO THE RENAISSANCE.—Chanson de Roland, Tristan et Isolde, Aucassin et Nicolète, les Fableaux, Roman de Renard, Roman de la Rose, les Chroniqueurs. Prerequisite, course 305.
First Semester.—3 hours a week.
310. FRENCH LITERATURE FROM MAROT TO MALHERBE.—History of ideas during the Renaissance. Poetic theories of the Pléiade and the beginnings of classicism. Lectures, readings and reports.
Second Semester.—3 hours a week.

Spanish

- 101-102. ELEMENTARY COURSE.—Grammar, oral work and easy reading. Wagner's *Spanish Grammar*. Reading of modern prose and plays with practice in dictation, writing and speaking.
First and Second Semesters.—4 hours a week.
201. THE NINETEENTH CENTURY.—A detailed study of representative modern authors. Reports on assigned readings. Composition.
First Semester.—3 hours a week.
202. THE NINETEENTH CENTURY.—Continuation of course 201.
Second Semester.—3 hours a week.

301. CERVANTES.—Readings in the *Don Quixote*. Discussions of contemporaneous literature and reports on collateral reading.

First Semester.—3 hours a week.

302. DRAMA OF THE SEVENTEENTH CENTURY.—Representative plays of Lope de Vega, Calderon, Ruiz de Alarcon, and Tirso de Molina. Lectures, assigned readings and reports.

Second Semester.—3 hours a week.

SOCIOLOGY

All courses count toward a major or minor.

Sociology 201, or an equivalent, is a prerequisite to any other course in the department.

It is strongly recommended that students expecting to major in sociology should have 6 hours of history as early in their college course as possible.

201. GENERAL PRINCIPLES.—The nature and import of sociology, social evolution and social organization. The nature, elements and structure of society. General principles are developed and worked out in connection with a study of concrete social problems.

First Semester.—3 hours credit.

202. RURAL SOCIOLOGY.—The social problems of country life and tested methods for their solution. Rural social institutions. The characteristics of the rural mind and the rural community.

Second Semester.—3 hours credit.

301. SOCIAL PATHOLOGY.—The social problems created by the dependent, defective and delinquent classes. Considerable use is made of first hand facts secured by research and personal visits to institutions.

First Semester.—3 hours credit.

302. SOCIAL BETTERMENT MOVEMENTS.—A study of the modern social settlement, its origin, philosophy and practical workings. The public school as a social center. The play ground and recreation movement. Employers' welfare work.

Second Semester.—3 hours credit.

303. ECONOMIC BASIS OF RURAL LIFE.—A consideration of the basic

economic factors in rural life. A brief survey of the problems of farm management, agricultural co-operation, marketing and farm accounting.

First Semester.—3 hours credit.

304. STATISTICS.—A study of the elements of statistical method. Application of statistics to the analysis of sociological and economic material.

Second Semester.—2 hours credit.

306. SOCIAL AND ECONOMIC ASPECTS OF THE LIQUOR TRAFFIC.—A study of the organized liquor traffic, especially in its bearings upon the community life and welfare.

Second Semester.—1 hour credit.

307. THE CHURCH AND SOCIAL PROBLEMS.—The contribution of organized religion to social betterment. A constructive study of the function and the opportunity of the modern church, in the elimination of social weakness and abnormality. The pastor as a social worker and the church as a regenerative force.

First Semester.—3 hours credit.

308. SOCIAL CONTROL.—A study of the social beliefs, customs, institutions and practices, which are society's instruments in dealing with the individual.

Second Semester.—3 hours credit.

SWEDISH

An increasing number of secondary schools are offering courses in the Scandinavian languages. Very few of these schools can employ a teacher for these courses alone. College graduates of Scandinavian parentage who possess some ability in the use of the spoken language can frequently find an opportunity to teach Swedish or Norwegian as part of their work. For this reason it has been deemed advisable to offer a course in Swedish for those students who might desire some training in Swedish grammar and a correct use of the spoken language.

If there is a sufficient demand more advanced courses will be offered later on and also courses in Norwegian.

The library contains a very good Scandinavian section.

- 101-102. ELEMENTARY SWEDISH.—The essentials of grammar and drill in writing and speaking.

First and Second Semesters.—3 hours credit.

Conservatory of Music

PIANOFORTE

FIRST GRADE.—Czerny—Velocity. Etudes Op. 299. Bertini—Studies Op. 10. Heller—Etudes Op. 47. Krause—Trill Studies Op. 2. Bach—Little Preludes and Fugues. Czerny—Octave Studies.

Twenty hours credit.

SECOND GRADE.—Cramer—Bulow, 50 Selected Studies. MacDowell—Studies Op. 39. Studies selected from Czerny, Op. 740, Krause Op. 15. Heller Etudes Op. 45 or 49. Pischna—Door, Technical Exercises. Bach—Two and Three-part invention. Mayer—Octave Studies, Book II.

Twenty hours credit.

THIRD GRADE.—Clementi—Gradus ad Parnassum. Tausig—Daily Exercises. Studies selected from Czerny, Op. 740. Moscheles—Etude. Op. 70. Bach—French Suites. Döring—Octave Studies.

Twenty hours credit.

FOURTH GRADE.—Chopin—Etudes Op. 10 and 25. Scharwenka—Preludes and Studies, Op. 27. Nicodé—Studies Op. 12. Bach—Preludes and Fugues. Kullak—Octave Studies.

Twenty hours credit.

The above studies are not given entire, but such selections are made as will meet the individual needs of the pupil. For a statement of general material offered see catalog number of college bulletin.

ORGAN

FIRST GRADE.—Rinck's Organ School. Buck's Studies in Pedal Phrasing, easy selections from Tours, Smart, Batiste, Guilman and others.

Twenty hours credit.

SECOND GRADE.—Rinck continued, Bach's Easier Preludes and Fugues, Sonatas by Merkel and Ritter, Mendelssohn's Preludes and Fugues and Sonatas, selected pieces by Batiste, Guilman, Smart, Saint-Saens and others.

Twenty hours credit.

THIRD GRADE.—Bach Sonatas, Chorals, Fugues and Toccatas, Handel Concertos, Widor Concertos, Concert pieces and selections by Reinberger, Guilman, Thiele and others.

Twenty hours credit.

FOURTH GRADE.—Bach, the more difficult Preludes and Fugues, Concert Overtures, Fantasias, and Suites from Best, Reger, Elgar, Bossi, Lemare and others.

Twenty hours credit.

VIOLIN

FIRST GRADE.—Hohman Violin School, Kayser Book I, Franz Ries position studies, Dont Etudes, easy solos and duets in the First Position. *Twenty hours credit.*

SECOND GRADE.—Herman Book II, Kayser Book II and III, Schradieck Technical Exercises, David, Grunwald, Mazas, Kreutzer, Easy Concertos of DeBeriot, David and standard composers. *Twenty hours credit.*

THIRD GRADE.—Fiorillo, Meertz, Schradieck, Rode Etudes, Concertos of Rode, Viotti, Kreutzer and DeBeriot. Mozart and Haydn Sonatas, Concert Pieces. *Twenty hours credit.*

FOURTH GRADE.—Gavinies, Pagannini Etudes, Bach and Beethoven Sonatas, Spohr, Molique, Vieuxtemps. *Twenty hours credit.*

VOICE

FIRST GRADE.—Breathing gymnastics, tone formation, connecting of registers, vowel studies and phonetics. Vocalises of Sieber, Concone and Lutgen. Study of the English ballad as a form. Songs by Jensen, Lassen, Strelezki, Grieg, Buck, Kucken, Gounod and others. *Six hours credit.*

SECOND GRADE.—Studies in phrasing, colorature exercises, vocalises of Vaccai, Bolondi, Marchesi. Italian pronunciation. Songs by Mendelssohn, Reinecke, Verdi and others. *Ten hours credit.*

THIRD GRADE.—Studies in rapid execution, vocalises by Panofka. Study of the German "Lied." Songs by Schumann, Schubert, Rubinstein, Liszt, Raff, Mozart, Donizetti, Bellini. *Twelve hours credit.*

FOURTH GRADE.—Selections from the Standard Operas and Oratorios, including the works of Bach, Handel, Haydn, Weber, Wagner, Gounod, Verdi, Saint-Saens, and Mascagni. Songs by Brahms, Gluck, Franz and others. *Twelve hours credit.*

HARMONY, COUNTERPOINT AND COMPOSITION

101. Elements of harmony, harmonization of melodies. Use of principal and subordinate chords. Inversions.

First Semester.—2 hours a week. *Two hours credit.*

102. Seventh chords and inversions, passing tones. Use of dominant and secondary sevenths. Writing from figured bass and from given melody.

Second Semester.—2 hours a week. *Two hours credit.*

203. Suspensions, anticipations, ninth and eleventh chords. Harmonization of chorals.
First Semester.—2 hours a week. *Two hours credit.*
204. Advanced harmony. Altered chords and their uses. Chorals, modulation. Accompaniments.
Second Semester.—2 hours a week. *Two hours credit.*
305. Counterpoint, in two, three, and four parts.
First Semester.—2 hours a week. *Two hours credit.*
306. Counterpoint strict and free up to five parts, also double and triple counterpoint at the 8th and 10th. Canon.
Second Semester.—2 hours a week. *Two hours credit.*
407. Canon and Fugue. Free composition.
First Semester.—2 hours a week. *Three hours credit.*
408. Free composition, orchestration.
Second Semester.—2 hours a week. *Three hours credit.*

HISTORY OF MUSIC

109-110.—GENERAL HISTORY AND APPRECIATION.—A general survey of the development of music from ancient to modern times. Attention will be given to the structure of the principal forms, a study of the instruments, the prevailing styles of the different periods, the great masters and their relation to the progress of musical art. No technical knowledge is required.

First and Second Semesters.—2 hours a week thruout the year.
Four hours credit.

211-212. MUSIC OF THE NINETEENTH CENTURY.—The great Romanticists. Piano music from Beethoven to Liszt. Orchestral and chamber music. The art song. Modern virtuosi. Opera and oratorio. National schools. American music. Modern tendencies. Musical education. Textbook, Dickinson's *The Study of the History of Music*, supplemented by assigned readings and the analysis of musical compositions. Students have access to a well-selected library of over three hundred volumes. An advanced course open to students who have completed Music 103-104 and who have sufficient technical preparation.

First and Second Semesters.—2 hours a week thruout the year.
Four Hours Credit.

EAR TRAINING

113. Recognition of intervals, study of rhythms, writing simple melodies from dictation.

First Semester.—1 hour a week. *One-half hour credit.*

114. Recognition of chords and their inversions, writing in two and four parts from dictation. Original melodies in simple song form.

Second Semester.—1 hour a week. *One-half hour credit.*

SUPERVISORS' TRAINING COURSE IN PUBLIC SCHOOL MUSIC

- 117-118.—Sight singing and ear training, music notation and terminology, chorus conducting, melody writing, study and comparison of music series, methods of public school music.

First and Second Semesters.—5 hours a week.

Three hours credit.

MUSIC NOTATION AND SIGHT SINGING

- 119-120. The course in music notation is planned for any student who wishes to learn to write music with correct notation and to spell, pronounce and define all terms ordinarily used in music teaching. No outside preparation is required. In the sight-singing class the student learns to sing correctly at sight any vocal music of ordinary difficulty in one, two or three parts.

First and Second Semesters.—1 hour a week.

One hour credit.

COLLEGE CHOIR

- 115-116. CHORAL SINGING.

First and Second Semesters.—1 hour credit.

COLLEGE BAND

- 121-122. BAND.—The Band has become a permanent organization. All students who play band instruments are eligible for membership, a reasonable degree of proficiency being the only requirement. The Band furnishes music for the various athletic events, and gives concerts at various times thruout the year.

First and Second Semesters.—1 hour credit.

EXPENSES

The terms for instruction in the various branches of music per semester of eighteen weeks, are as follows:

Voice and Piano—Mr. Strong and Mr. Lawrence.

Two private half hour lessons per week.....\$72.00

One private half hour lesson per week..... 40.50

Piano and Violin—Miss Mann and Miss Payne.

Two private half hour lessons per week.....\$54.00

One private half hour lesson per week..... 31.50

Normal Course in Public School Music..... 35.00

Harmony, Counterpoint and Composition..... 14.00

History of Music..... 6.00

Notation and Sight Reading..... 4.00

Ear Training 1.50

Rent of Piano, one hour per day..... 4.50

Rent of Pipe Organ, one hour per day..... 12.00

(Additional hours on organ, half price).

Use of motor one hour each day..... 10.00

Beginners in instrumental music will not be accepted for less than two lessons a week.

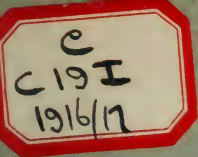
Student Privilege Fee, per semester..... 2.50

Graduation Fee..... 5.00

Table board at Gridley Hall, per semester..... 72.00

Furnished rooms in private residences, per week
.....\$1.50 to 2.00

Room and board in private families, per week, \$4.50
to 7.00



VOL. XII

NO. 3—EXTRA

Carleton College

BULLETIN

ANNOUNCEMENT OF THE COURSES
OFFERED IN 1916-17



THE LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

March, 1916

NORTHFIELD, MINN.

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March, and June.

Entered April 4, 1905, at Northfield, Minn., as second-class matter
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CIVIL CALENDAR—1916

	S	M	T	W	T	F	S		S	M	T	W	T	F	S		S	M	T	W	T	F	S
July	..	..	..	..	..	..	1		..	1	2	3	4	5			..	..	..	..	1	2	
	2	3	4	5	6	7	8		6	7	8	9	10	11	12		3	4	5	6	7	8	9
	9	10	11	12	13	14	15		13	14	15	16	17	18	19		10	11	12	13	14	15	16
	16	17	18	19	20	21	22		20	21	22	23	24	25	26		17	18	19	20	21	22	23
	23	24	25	26	27	28	29		27	28	29	30	31	..	..		24	25	26	27	28	29	30
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Aug.																							
Sept.																							

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Oct.	1	2	3	4	5	6	7	Nov.	..	..	..	1	2	3	4	Dec.	..	3	4	5	6	7	1	2
	8	9	10	11	12	13	14		5	6	7	8	9	10	11		3	4	5	6	7	8	9	
	15	16	17	18	19	20	21		12	13	14	15	16	17	18		10	11	12	13	14	15	16	
	22	23	24	25	26	27	28		19	20	21	22	23	24	25		17	18	19	20	21	22	23	
	29	30	31	..	..	..	..		26	27	28	29	30	..	..		24	25	26	27	28	29	30	
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1917

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Jan.	..	1	2	3	4	5	6		..	..	..	7	1	2	3		..	..	..	7	1	2	3
	7	8	9	10	11	12	13		4	5	6	7	8	9	10		4	5	6	7	8	9	10
	14	15	16	17	18	19	20		11	12	13	14	15	16	17		11	12	13	14	15	16	17
	21	22	23	24	25	26	27		18	19	20	21	22	23	24		18	19	20	21	22	23	24
	28	29	30	31	..	..	..		25	26	27	28	..	..	..		25	26	27	28	29	30	31
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	S	M	T	W	T	F	S		S	M	T	W	T	F	S		S	M	T	W	T	F	S
Apr.	1	2	3	4	5	6	7	May	..	..	1	2	3	4	5	June	..	..	..	..	1	2	
	8	9	10	11	12	13	14		6	7	8	9	10	11	12		3	4	5	6	7	8	9
	15	16	17	18	19	20	21		13	14	15	16	17	18	19		10	11	12	13	14	15	16
	22	23	24	25	26	27	28		20	21	22	23	24	25	26		17	18	19	20	21	22	23
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	S	M	T	W	T	F	S		S	M	T	W	T	F	S		S	M	T	W	T	F	S		
July	1	2	3	4	5	6	7	Aug.	..	..	..	1	2	3	4	Sept.	..	2	3	4	5	6	7	8	
	8	9	10	11	12	13	14		5	6	7	8	9	10	11		12	13	14	15	16	17	18	19	20
	15	16	17	18	19	20	21		12	13	14	15	16	17	18		19	20	21	22	23	24	25	26	27
	22	23	24	25	26	27	28		19	20	21	22	23	24	25		26	27	28	29	30	31	..	..	..
	29	30	31	..	..	..	..		26	27	28	29	30	31	..		..	..	30	..	..	..	..	..	..
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	S	M	T	W	T	F	S		S	M	T	W	T	F	S		S	M	T	W	T	F	S
Oct.	..	1	2	3	4	5	6	Nov.	..	..	..	1	2	3	Dec.	..	..	..	..	..	..	1	
	7	8	9	10	11	12	13		4	5	6	7	8	9		10	2	3	4	5	6	7	8
	14	15	16	17	18	19	20		11	12	13	14	15	16		17	9	10	11	12	13	14	15
	21	22	23	24	25	26	27		18	19	20	21	22	23		24	16	17	18	19	20	21	22
	28	29	30	31	..	..	..		25	26	27	28	29	30		..	23	24	25	26	27	28	29
	..	..	..	..	..	..	..		..	..	..	..	..	..		30	31	..	..	..	..	..	

College Calendar

1916

- June 11-14,* Commencement Week.
June 11, Sunday, Baccalaureate Sermon.
June 14, Wednesday,
 10:30 a. m., Commencement Exercises.
 SUMMER VACATION
September 11-12, Monday
 and Tuesday, Registration for First Semester.
 ter.
September 13, Wednesday,
 10:30 a. m., First Semester Begins.
October 8-13, Sunday to
 Friday, Fiftieth Anniversary Week.
November 30, Thursday, Thanksgiving Day.*
December 21, Thursday,
 12:20 p. m., Christmas Recess Begins.

1917

- January 4, Thursday,*
 8:00 a. m., Christmas Recess Ends.
January 23-27, Semester Examinations.
January 27, Saturday, First Semester Ends.
January 29, Monday, Final Registration for Second Semester.

January 30, Tuesday,
 8:00 a. m., Second Semester Begins.
February 22, Tuesday, Washington's Birthday.*
March 30, Friday,
 12:20 p. m., Easter Recess Begins.
April 10, Tuesday, 8:00 a. m., Easter Recess Ends.
May 30, Wednesday, Memorial Day.*
June 5-9, Semester Examinations.
June 10-13, Commencement Week.
June 13, Wednesday, Second Semester Ends.
 SUMMER VACATION
September 12, Wednesday,
 10:30 a. m., First Semester Begins.

*Holiday.

General Information

EXPENSES

Tuition, per semester of eighteen weeks.....\$50.00*

Laboratory Fees, per semester,

Biology 105, 106, 201, 202, 308, 309..... 1.00

Biology, other courses..... 4.00

Chemistry 101, 102..... 3.00

Chemistry, 308 2.00

Chemistry, other courses..... 6.00

Geology, all courses..... 1.00

Physics 201, 202, 203, 204..... 3.50

Physics 307, 308..... 4.00

Breakage deposit (Biology, Chemistry, Physics) 5.00

Student Privilege Fee, admitting to all athletic contests, debates, etc., per semester..... 2.50

Special Registration Fee (see page 5)..... 2.00

Fee for private examination..... 2.00

Graduation Fee 5.00

Table Board at Gridley Hall, or at the Men's Dormitory, per semester..... 72.00

Furnished rooms for young men in private residences, with heat, light and care, per week for each occupant\$1.50 to \$2.50

Room and board in private families, including fuel and light, per week, from.....\$5.00 to \$7.50

Total per year for tuition, board and room (not including laundry) for those rooming at Gridley Hall or at the Men's Dormitory.....\$350.00

For expenses for music see page 47.

*The tuition includes the theoretical courses in music, but not individual instruction in voice, piano, organ or violin.

All bills are payable by the semester and in advance. No tuition bills are made for less than a semester, and no refund is given except in case of sickness necessitating an absence of a half semester or more, in which case half tuition will be refunded. Students taking more than 16 hours will be charged \$3 for each extra hour.

Music students taking college courses will be charged at the rate of \$10 per semester for a three-hour course.

REQUIREMENTS FOR ADMISSION

I. ADMISSION BY CERTIFICATE.—The following candidates are admitted to the Freshman class on presentation of certificates signed by the proper authorities, showing the kind and amount of work done:

1. Graduates from any four-year course of a high school approved by the Minnesota State High School Board.

2. Graduates from any four-year course of high schools accredited by the North Central Association of Colleges and Secondary Schools, or by the state university of the state in which the school is situated.

Such certificates, however, must represent a total of at least fifteen units of work, and must include the following: English, three units; Mathematics, two units; and in addition two series of two units each, each series being chosen from one of the following groups of subjects: (a) *Foreign languages, (b) History and social sciences, (c) Natural sciences and mathematics.

The term *unit* means the equivalent of five recitations per week, for one year of at least thirty-six weeks, in one branch of study. In case of laboratory and shop work two periods are counted as the equivalent of one in recitation.

Blank entrance credit certificates will be furnished upon application to the Registrar.

*In view of the requirement of a minimum of four years of foreign language for graduation with the degree of B. S., and of six years for the degree of B. A., students are strongly advised to take at least two years of foreign language during their high school course. Four years of foreign language in high school are recommended.

II. ADMISSION BY EXAMINATION.—Candidates not presenting approved certificates may be admitted upon examination. Examinations will be given upon the work covered by the list of secondary units approved by the North Central Association of Colleges and Secondary Schools. Candidates for admission by examination must meet the same specific requirements as those for admission by certificate.

HONORARY SCHOLARSHIPS

Honorary scholarships of \$50 each are offered to the first ranking student among the young men and to the first ranking student among the young women in each graduating class of an accredited four-year high school, provided that the superintendent certifies that such students are of honor grade.

ADVANCED STANDING

Candidates for admission from other colleges must bring certificates of honorable dismissal.

Candidates for the Bachelor's degree must complete at least one year of work, including the last semester of their course, in residence at this institution.

No advance credit will be allowed for work done in secondary schools, or in any institution below the rank of a standard college, except upon examination. An exception to this rule will be made in the case of graduates from the advanced courses of the Minnesota State Normal Schools who will be given credit for a year of college work. They will be given provisional Sophomore standing, but will be conditioned in the required Freshman studies which they have not taken. In order to secure the year's credit the candidate must present a certificate signed by the President of the school, showing the studies pursued in the normal course.

REGISTRATION

The committee on registration will be in session at the Library on Monday and Tuesday, Sept. 11 and 12, 1916, on Monday from 2 to 5 P. M. and on Tuesday from 9 A. M. to 12:00 M. and from 2 to 5 P. M. Students may complete their registration on either of these days. A registration fee of two dollars will be charged those enrolling after registration days.

Candidates for admission to the college are urged to meet the committee on Monday if possible. It will facilitate registration if the candidates will send their certificates to the Registrar before September 1.

REQUIREMENTS FOR GRADUATION

The degree of Bachelor of Arts or Bachelor of Science will be conferred upon a student who fulfills the conditions as to amount, grade and distribution of work stated under I, II, III, and IV below :

I. AMOUNT OF WORK.—A student must complete satisfactorily 120 semester hours of work, in addition to the required work in Physical Education (6 credits). A semester hour is defined as one hour of classroom work per week, or its equivalent, pursued for one semester. By a credit in Physical Education is meant the work of one semester.

The normal amount of work for a student is 15 hours a semester in addition to work in Physical Education; a minimum of 12 hours is required.

In beginning a language no credit will be given for less than a year's work.

Twenty-four hours is the maximum credit allowed in any one subject.

II. GRADE OF WORK.—A student must secure 120 grade credits. A student securing an "A" is given 3 grade credits for each hour so marked; a "B," two; and a "C," one. This means that an average of "C" must be maintained for the four years' work.

III. DISTRIBUTION OF WORK.

1. The student must conform to the requirements of the specific years of the course (see IV below).

2. The student must complete a major and two minors. A major is not less than eighteen hours, and a minor not less than twelve hours, in a single department. The major shall be chosen from one of the following groups of subjects, and a minor from each of the other two.

I.	II.	III.
English	Bible	Astronomy
French	Economics	Biology
German	Education	Chemistry
Greek	History	Geology
Hebrew	Philosophy	Mathematics
Latin	Political Science	Physics
Library Science	Sociology	
Spanish		
Swedish		

3. Candidates for the B. A. degree may choose their major from any one of these three groups. Candidates for the B. S. degree must choose their major from Group III.

4. Choice of a major must be made before the end of the Sophomore year, and reported to the Registrar. The department in which the student has made his selection shall then assign him an advisor whom the student shall consult in regard to subsequent elections of courses. The choice of a major is not to be changed except by vote of the faculty on recommendation of the department in which the major had been chosen.

5. Each student shall choose, under the advice and subject to the approval of his advisor, twelve hours additional to the major, of such a character as to support or reinforce the major. This advice should be sought by the student as soon as he has decided as to the department in which he wishes to do his major work. Courses counted toward a minor are not for that reason excluded from this list of supporting courses.

6. Candidates for the B. A. degree must have completed in secondary school and college a total of six years of work in foreign language, of which two years must be in Latin, and at least two years must be taken in college. Candidates for the B. S. degree must have completed in secondary school and college, a total of four years of work in foreign language, of which at least two years must be taken in college.

Students planning to take up graduate work upon completion of their college course should secure a reading knowledge of French and German as early as possible.

IV. REQUIREMENTS IN SPECIFIC YEARS.

Freshman Year

B. A. Course—

REQUIRED:

English
Language
Mathematics or
Ancient Language

ELECTIVE:

Bible
Biology
Chemistry
French
German
Greek
History
Latin
Public Speaking
Spanish
Swedish

B. S. Course—

REQUIRED:

English
Language
Mathematics

ELECTIVE:

Bible
Biology
Chemistry
French
German
Greek
History
Latin
Public Speaking
Spanish
Swedish

Candidates for the B. A. degree may have an option between mathematics and ancient language in the requirements for the Freshman year. If an ancient language is chosen, three years of this ancient language are required for the B. A. degree. In this case a total of seven years of language is required for graduation. Of all other Freshmen a year of college mathematics is required. This for the first semester may be Higher Algebra or College Algebra according to previous preparation; for the second semester, Solid Geometry or Trigonometry.

Sophomore Year*B. A. Course—*

REQUIRED:

Language
Psychology*B. S. Course—*

REQUIRED:

Language
Two of the following :
Biology
Chemistry
Mathematics
Physics**Junior and Senior Years**

The remaining courses of the Sophomore year and those of the Junior and Senior years are elective, subject to the requirements of the group system and to the sequence of courses within departments.

CLASSIFICATION

For participation in class contests, for chapel seating and for administration purposes in general, classification is determined at the beginning of the college year only, according to the following plan: A student having secured at least eighteen hour-credits and eighteen grade-credits will be classified as a Sophomore; fifty-four hour-credits and fifty-four grade-credits will be classified as a Junior; and eighty-seven hour-credits and eighty-seven grade-credits will be classified as a Senior.

For publication in the annual catalog classification is determined at the end of the first semester according to the following plan: A student having secured at least thirty-hour-credits and thirty grade-credits will be classified as a Sophomore; sixty hour-credits and sixty grade-credits, a Junior; ninety hour-credits and ninety grade-credits, a Senior.

Courses of Instruction, 1916-17

The following list of courses is offered for the year 1916-17. That students may be helped wisely to plan their elections, announcement is made of certain courses to be offered in 1917-18. The list of courses offered in 1915-16 is published in the bulletin to which this is a supplement.

Only courses numbered below 200 are open to Freshmen, and only those numbered below 300 are open to Sophomores. As a rule odd numbers are used for courses offered in the first semester, and even numbers for those offered in the second semester.

In general no credit or only part credit is given for a year course unless the student continues the course thruout the year. Year courses are indicated by printing the two numbers together.

The number of hours credit indicates the number of hours for each semester.

ASTRONOMY

Prerequisites: Mathematics 103 and 104.

MAJOR.—Any course in astronomy counts toward a major or a minor in the department of Mathematics and Astronomy.

MINOR.—Courses 301, 302, 303, and 304.

301. GENERAL ASTRONOMY.—A course in descriptive astronomy, with study of the apparatus in Goodsell Observatory and frequent evenings with the telescope.

Juniors, First Semester.—3 hours credit.

302. GENERAL ASTRONOMY.—A continuation of course 301.

Juniors, Second Semester.—3 hours credit.

303. PRACTICAL ASTRONOMY.—Open only to those who have taken courses 301 and 302. The student is instructed in methods of computing; problems* involving the transformation of coördinates; the use of ephemerides; comparison of clocks; conversion of time; determination of clock errors with the transit instrument; and in the use of the equatorial telescope in connection with various problems. The majority of the clear evenings are spent in observational work.

Seniors, First Semester.—3 hours credit.

304. PRACTICAL ASTRONOMY.—A continuation of course 303.

Seniors, Second Semester.—3 hours credit.

305. PRACTICAL ASTRONOMY.—A course in the theory and practice of measurement of stellar photographs.
Graduate Students, First Semester.—Credit dependent upon amount of work done by student.
306. PRACTICAL ASTRONOMY.—A course in the theory and practice of the computation of orbits.
Graduate Students, Second Semester.—3 hours credit.

BIBLICAL LITERATURE

MAJOR.—Six hours in Old Testament, six hours in New Testament, and six hours selected from courses in Hebrew, Missions, or History of Religion.

MINOR.—Three hours in Old Testament, three hours in New Testament, and six hours selected from courses in Hebrew, Missions, or History of Religion.

A.—Historical Courses.

OLD TESTAMENT.

103. OLD TESTAMENT HISTORY TO THE DIVISION OF THE KINGDOM.—Sources of Old Testament History; the narratives of Genesis; the work of Moses; the conquest of Canaan; the establishment of the monarchy; Saul, David and Solomon. Peritz, *Old Testament History*.
Freshmen and Sophomores, First Semester.—2 hours credit.
104. OLD TESTAMENT HISTORY.—Continuation of course 103. The divided kingdoms: Israel and Judah; the prophetic contribution; the Babylonian exile; the restoration; the Macbean struggle. Peritz, *Old Testament History*.
Freshmen and Sophomores, Second Semester.—2 hours credit.
- 105-106. INTRODUCTION TO THE OLD TESTAMENT.—A general account of the Old Testament and its several books. Lectures and text-book; G. B. Gray, *Critical Introduction to the Old Testament*.
Freshmen and Sophomores, First and Second Semesters.—1 hour credit.
203. THE RELIGION OF ISRAEL.—A sketch of the ancient Hebrew religion from its beginnings, followed by a sketch of Jewish religion after the Exile. Lectures and text-book: J. P. Peters, *Religion of the Hebrew People*.
Juniors and Seniors, First Semester.—2 hours credit.

204. THE TEACHING OF THE PROPHETS.—With particular attention to the social teachings of the Hebrew prophets. Lectures and text-book: A. F. Kirkpatrick, *The Doctrine of the Prophets*.
Juniors and Seniors, Second Semester.—2 hours credit.

NEW TESTAMENT.

102. THE APOSTOLIC AGE.—The origin and spread of Christianity to the close of the New Testament period, with an account of the New Testament writings. Text-book: J. V. Bartlet, *The Apostolic Age*.
Freshmen and Sophomores, First Semester.—3 hours credit.
301. THE LIFE OF CHRIST.—A study of the sources for the life of Jesus; the Maccabean Period; the Hellenistic influence. This will lead up to the study of the environment, life and teachings of Jesus; his relation to human life and the moral and spiritual order as found in the Gospels.
Juniors and Seniors, First Semester.—3 hours credit.
302. SOCIAL TEACHINGS OF JESUS.—A study of the main trends in Jesus' teaching with reference to the idea of the Kingdom of God on earth and the application of His principles to modern social problems. Lectures and text-book.
Juniors and Seniors, Second Semester.—3 hours credit.

B.—History of Religion.

108. THE CHRISTIAN RELIGION.—A statement of its historical elements and of the evidences for the same. Lectures and text-book.
Freshmen and Sophomores, Second Semester.—3 hours credit.
221. INTRODUCTION TO THE HISTORY OF RELIGION.—The nature and growth of religious belief and worship. Text-book: Jevons' *Introduction to the History of Religion*, and lectures.
Sophomores, Juniors, and Seniors, First Semester.—3 hours credit.
222. THE RELIGIONS OF THE ANCIENT SEMITIC WORLD.—A sketch of the religions of Egypt, the Semitic peoples, and Persia. Lectures and text-book: G. F. Moore, *The History of Religions*, Vol. 1.
Sophomores, Juniors, and Seniors, Second Semester.—3 hours credit.

C.—Missions.

205. MISSIONS IN INDIA, CHINA AND JAPAN.—A detailed study of the educational, social and religious aspects of Christian missions in these lands. This includes a brief survey of the religions of these peoples.

Sophomores, Juniors, and Seniors, First Semester.—3 hours credit.

206. MISSIONS IN MOHAMMEDAN LANDS.—A study of Mohammed's life and the Koran, together with the present social and religious conditions in Mohammedan lands. This will be followed by a detailed study of missions in Africa.

Sophomores, Juniors, and Seniors, Second Semester.—3 hours credit.

D.—Hebrew Language.

- 321-322. ELEMENTARY HEBREW.—A beginners' course, to prepare for the Old Testament courses of the Divinity curriculum.

Juniors and Seniors, First and Second Semesters.—4 hours credit.

(Courses in Advanced Hebrew and other Semitic languages may be arranged.)

BIOLOGY

MAJOR.—Students who major in this department are required to have an elementary knowledge of physics and chemistry, such as may be gained from the high school or beginning college courses. All courses in the department are counted toward a major. Elections must be made in such a manner as to give a reasonable mastery of some particular branch of biology.

MINOR.—Altho all courses in the department are counted toward a minor, students are required to elect courses in some logical sequence.

A.—Zoology.

- 101-102. THE PRINCIPLES OF ZOOLOGY.—An attempt is made to give to the beginner a broad view of the fundamental principles of life as applied to the animal kingdom. Two hours class and four hours laboratory.

First and Second Semesters.—3 hours credit.

- 203-204. VERTEBRATE ZOOLOGY.—The comparative anatomy of vertebrates, both living and fossil, forms the chief subject matter of this course. From one to two hours class and four

hours laboratory. Open to Freshmen presenting entrance credit in zoology.

First and Second Semesters.—3 hours credit.

301. VERTEBRATE EMBRYOLOGY.—One hour class and four hours laboratory each week. Prerequisite, course 102, 106, or 204. Recommended, course 204. Not offered in 1916-17.

First Semester.—3 hours credit.

302. VERTEBRATE EMBRYOLOGY.—A continuation of 301.

Second Semester.—3 hours credit.

305. GENERAL HISTOLOGY.—One hour class and four hours laboratory each week. Prerequisite, course 102, 106, or 204. Not offered in 1917-18.

First Semester.—3 hours credit.

306. GENERAL HISTOLOGY.—A continuation of course 305.

Second Semester.—3 hours credit.

B.—Botany.

- 103-104. GENERAL BOTANY.—A general view of the plant kingdom and its life processes.

First and Second Semesters.—3 hours credit.

309. MICROBIOLOGY.—A study of bacteria, moulds, etc. Prerequisite, course 104.

First Semester.—3 hours credit.

312. ECOLOGY.—The relations of plants to their environment. Field, laboratory, and class. Prerequisite, course 104. Recommended 318.

Second Semester.—3 hours credit.

317. FOREST BOTANY.—A consideration of some of the problems of forestry. Field, laboratory, and class. Prerequisite, course 104.

First Semester.—3 hours credit.

318. TAXONOMY.—The classification of plants. Prerequisite, course 104. Field, laboratory, and class.

Second Semester.—3 hours credit.

C.—General.

- 105-106. GENERAL PHYSIOLOGY.—A comparative study of life processes. The physiology of man will be emphasized. Four hours of classwork and demonstration lectures per week. Open to all. Recommended, course 102.

First and Second Semesters.—3 hours credit.

201-202. EVOLUTION AND HEREDITY.—Three hours class work each week. No laboratory. Prerequisite, course 102, 104, 106, or 204.

First and Second Semesters.—3 hours credit.

308-309. TEACHERS' COURSE.—Elsewhere listed as Education 304. Prerequisite, 12 hours credit in Biology. Open to Seniors who expect to teach a biological subject.

First and Second Semesters.—1 hour credit.

313. ADVANCED WORK.—Individual work of a nature not covered by regular courses may be elected upon permission from the chairman of the department. Prerequisite, such work as may be necessary.

First Semester.—Credit by arrangement.

314. ADVANCED WORK.—As announced for course 313.

Second Semester.—Credit by arrangement.

315. SEASIDE WORK.—Summer work done at the Marine Biological Laboratory at Woods Hole, Mass., or at similar institutions, will be credited under this course number. Credit according to work completed.

CHEMISTRY

MAJOR AND MINOR.—Courses 101 and 102 are not counted toward a major.

101-102. AN INTRODUCTION TO INORGANIC CHEMISTRY.—Illustrated lectures and laboratory work. A large part of the laboratory time is devoted to quantitative experiments. It is the purpose of this course to develop the fundamental chemical laws and to show the relation of chemical theory to those laws. Open to all students who have not had elementary chemistry. Three hours of class room and three hours of laboratory work a week.

First and Second Semesters.—3 hours credit.

103-104. GENERAL INORGANIC CHEMISTRY.—Text: Alexander Smith's *General Inorganic Chemistry*. The text is supplemented by lectures and class room experiments. The subject is developed in the light of modern theories. The work in the laboratory consists of advanced experiments, developing the general principles of chemistry. Open to students who have

taken courses 101 and 102, or their equivalents. Three hours of class room and three hours of laboratory work a week.

First and Second Semesters.—3 hours credit.

- 201-202. QUALITATIVE ANALYSIS.—The course is developed in the light of ionic and mass actions, and the chemical basis of analytical methods receives special emphasis. Many commercial substances are analyzed and it is the aim that there shall be a thoro drill in all the important methods of analysis. Prerequisite, courses 103 and 104. One hour of class room and six hours of laboratory work a week.

First and Second Semesters.—3 hours credit.

301. QUANTITATIVE ANALYSIS.—Talbot's *Quantitative Analysis* is used as a guide, and along with the gravimetric and volumetric work, electro-chemical analysis is carried thru the year. Prerequisite, courses 201 and 202. One hour of class room and six hours of laboratory work a week.

First Semester.—3 hours credit.

302. CONTINUATION OF COURSE 301.—One hour of class room and six hours of laboratory work a week.

Second Semester.—3 hours credit.

303. ORGANIC CHEMISTRY.—This course consists of lectures presenting the relations between the different classes of organic compounds, also the structural formulae and the evidences upon which they rest. The laboratory work is devoted to the preparation of typical organic compounds, and the study of their properties. Open to students who have taken courses 201 and 202. Three hours lecture and three hours laboratory per week.

First Semester.—3 hours credit.

304. CONTINUATION OF COURSE 303.—Three hours lecture and three hours laboratory per week.

Second Semester.—3 hours credit.

305. APPLIED CHEMISTRY.—This is an advanced course in quantitative analysis in which commercial methods of analysis receive special attention, such as agricultural analysis, food analysis, fuel analysis, gas analysis, iron and steel analysis, and assaying. Prerequisite, courses 301 and 302. One hour of class room and six hours of laboratory work a week.

First Semester.—3 hours credit.

306. CONTINUATION OF COURSE 305.—One hour of class room and six hours of laboratory work a week.
Second Semester.—3 hours credit.
308. TEACHERS' COURSE.—Elsewhere listed as Education 306. Pre-requisite, courses 201 and 202. One hour of class room and two hours of laboratory work a week. Open to Seniors.
Second Semester.—2 hours credit.

ECONOMICS AND POLITICAL SCIENCE

ECONOMICS.

MAJOR.—A major includes course 201-202. The work in Industrial and Social History of England may count as three hours toward a major.

MINOR.—A minor includes course 201-202.

201-202.—ECONOMICS.—Introductory Course. The nature and scope of economics, the characteristics of the present economic system, and a brief survey of the evolution of economic society; a study of the principles and problems of economics, elementary concepts, and the four subdivisions—consumption, production, value and exchange, and distribution. Public industry and the relation of the state to private enterprise, public expenditures, public revenues; a brief survey of the development of economic thought.

First and Second Semesters.—3 hours credit.

205. SOCIAL PROBLEMS.—A study of present-day social conditions. Attention is called to certain weaknesses in our social order, and a study is made of what is being done to remedy these weaknesses. Special attention is given to such topics as Immigration; Child Labor; Unemployment; Our Defective Classes; Crime and Punishment; Marriage and Divorce; The Liquor Problem; Poverty; and the Conservation of Natural Resources, of Animal and Plant Life, and of Human Life. This course is also referred to as Sociology 205, and may count toward a minor in sociology.

Second Semester.—3 hours credit.

307. LABOR PROBLEMS.—The significance of organized labor, a brief history of the labor movement, trade-union methods, methods of promoting industrial peace; a special study of such problems as industrial remuneration, child labor, woman

labor, the sweated industries, and some recent tendencies in the industrial world.

First Semester, 1917-18.—3 hours credit.

308. SOCIALISM AND SOCIAL REFORM.—The history, theory and present status of socialism; communism, anarchism, syndicalism; the life and works of some of the principal exponents of these various social theories; a general survey of the great social movement toward political and economic democracy in our own and in other countries.

First Semester.—3 hours credit.

311. FINANCIAL HISTORY OF THE UNITED STATES.—Colonial financial legislation, the establishing of a national system, the United States banks, the independent treasury, and state banks; a study of the principal banking acts, currency measures, tariff acts, and panics.

Second Semester, 1917-18.—3 hours credit.

312. MONEY AND BANKING.—The nature and functions of money, credit and the nature of credit transactions, the forms and issue of bank currency, the banking system of the United States and of the principal foreign countries, and the theory and history of bimetallism.

Second Semester, 1917-18.—3 hours credit.

315. PUBLIC FINANCE.—Public expenditures; public revenues; the development of taxation historically traced, excises and customs duties, property taxes and personal taxes; the growth and nature of public credit and public debts; and financial administration.

First Semester.—3 hours credit.

321. PRACTICAL POLITICS.—Seminar Course. A study of the workings of congress, of our state legislature, and of our municipal government; a study of men and measures. The Congressional Record, the various government publications, and periodical literature are used as a basis for the work.

First Semester, 1917-18.—2 hours credit.

322. ECONOMIC AND SOCIAL PROBLEMS.—Research work and the use of original documents, the collecting of material and the preparation of special topics, the collecting of data for debates and the preparing of bibliographies. The aim of this course is to familiarize the student with the government publications and other material available for the study

of economic and social problems. The course is conducted as a seminar in economics and political science.

Second Semester.—2 hours credit.

328. TEACHERS' COURSE IN SOCIAL PROBLEMS.—Elsewhere listed as Education 324.

Second Semester.—1 hour credit.

POLITICAL SCIENCE.

MAJOR.—Not offered.

MINOR.—Any course may be counted toward a minor.

- 201-202. AMERICAN GOVERNMENT AND POLITICS.—The colonial origins of American institutions; the evolution of the federal constitution, the state constitutions, and of political issues in the United States; the general features of the federal system of government, and of the state governments. State government; the constitutional basis of state government, the state executive department, the state legislature, and the state judicial system; the organization of municipal government, municipal functions; and social and economic legislation.

First and Second Semesters.—3 hours credit.

- 307-308. POLITICAL SCIENCE.—Introductory course. A general outline of political science, viewing the state from the standpoint of past development and present conditions; the nature, origin, evolution, and theories of the state; sovereignty, law, and the relation of state to state; the organization of government, separation and division of powers, political parties, local and colonial government, and the province and functions of government.

First and Second Semesters, 1917-18.—3 hours credit.

- SEMINAR.—PRACTICAL POLITICS. See Economics 321-322.

EDUCATION

MAJOR.—Any course except the special teachers' courses counts toward a major.

MINOR.—Any course except the special teachers' courses counts toward a minor.

201. PSYCHOLOGY.—This course is prerequisite to all other courses in the department. It is also announced as Philosophy 201. Text-book, lectures and experimental work. Text-book: Pillsbury's *Essentials of Psychology*.
Sophomores, First Semester.—3 hours credit.

202. PSYCHOLOGICAL PRINCIPLES OF TEACHING.—An application of the principles and laws of psychology to teaching, with an examination of the tendencies in modern educational thought as to the aims, values, and essential content of education. Text-books: James' *Talks to Teachers*, Bagley's *Learning Process*, Dewey's *Schools of Tomorrow*.
Sophomores, Second Semester.—3 hours credit.
301. HISTORY OF EDUCATION.—A survey of the educational theories and systems of the Greeks, Romans, and Middle Ages, with a more detailed study of the subject from the Renaissance to the present time. Text-book: Monroe's *History of Education*, with lectures and reports.
Juniors, First Semester.—3 hours credit.
302. EDUCATIONAL ADMINISTRATION.—A study of the organization and administration of education in the United States, with special attention to the school system of Minnesota. Text-book: Dutton and Snedden's *Administration of Public Education in the United States*.
Juniors, Second Semester.—3 hours credit.
303. SECONDARY EDUCATION.—A course of special training for high school work. The aims, methods, and current problems of secondary education are discussed. By special arrangement with the Northfield High School, the members of the class devote two hours each week to observation of the high school work and practice teaching in the high school. Text-books: Brown's *The American High School*, Johnston's *High School Education*, supplementary readings, reports and discussions.
Seniors, First Semester.—3 hours credit.
304. TEACHERS' COURSE IN BIOLOGY.—This course is also announced as Biology 308-309.
Seniors, First and Second Semesters.—1 hour credit.
306. TEACHERS' COURSE IN CHEMISTRY.—This course is also announced as Chemistry 308.
Seniors, Second Semester.—2 hours credit.
308. TEACHERS' COURSE IN ENGLISH.—This course is also announced as English 334.
Seniors, Second Semester.—2 hours credit.

310. TEACHERS' COURSE IN GERMAN.—This course is also announced as German 308.
Seniors, Second Semester.—2 hours credit.
312. TEACHERS' COURSE IN HISTORY.—This course is also announced as History 306.
Seniors, Second Semester.—2 hours credit.
314. TEACHERS' COURSE IN LATIN.—This course is also announced as Latin 302.
Seniors, Second Semester.—2 hours credit.
316. TEACHERS' COURSE IN MATHEMATICS.—This course is also announced as Mathematics 306.
Seniors, Second Semester.—2 hours credit.
- 317-318. TEACHERS' COURSE IN PHYSICAL EDUCATION. (MEN.)—This course is also announced as Physical Education 303-304.
First and Second Semesters.—2 hours credit.
320. TEACHERS' COURSE IN PHYSICAL EDUCATION (WOMEN.)—This course is also announced as Physical Education 303-304.
Second Semester.—2 hours credit.
322. TEACHERS' COURSE IN PHYSICS.—This course is also announced as Physics 312.
Second Semester.—2 hours credit.
324. TEACHERS' COURSE IN SOCIAL PROBLEMS.—This course is also announced as Economics 328.
Second Semester.—1 hour credit.
- 325-328. TEACHERS' COURSES IN LIBRARY SCIENCE.—These courses are also announced as Library Science 301-304.
First and Second Semesters.—4 hours credit.
330. TEACHERS' COURSE IN PUBLIC SPEAKING.—This course is also announced at English 314.
Second Semester.—1 hour credit.

ENGLISH AND PUBLIC SPEAKING

ENGLISH.

REQUIREMENT.—English 101-102 is required of all candidates for a degree. Students who make unsatisfactory grades in this course are held for further work in English at the discretion of the department.

MAJOR AND MINOR.—All courses in English except course 101-102 are counted toward a major or a minor in English.

101-102. FRESHMAN COMPOSITION.—The elements of effective writing based upon study of selected authors, with practice in

various forms of composition. Frequent conferences with the instructor. Collateral reading.

First and Second Semesters.—3 hours credit.

201. NEWSPAPER WRITING.—An elementary course providing instruction and practice in the details of the work of the newspaper reporter, including news gathering and newspaper writing.
First Semester.—3 hours credit.

211. COMPOSITION AND LITERATURE.—A course combining practice in writing with study of literary prose of the eighteenth and nineteenth centuries. It is designed especially for students who desire a second course in composition but who do not care to take the more advanced course.

First Semester.—3 hours credit.

- 213-214. INTRODUCTION TO ENGLISH LITERATURE.—An introductory course in English literature, the aim of which is to enable the student to find some basis for a genuine appreciation of literature. Attention is given to the development of English prose and poetry, and to the principal types of literature, such as epic, lyric, drama, essay, novel, etc.

First and Second Semesters.—3 hours credit.

- 301-302. ADVANCED COMPOSITION.—Practice in writing, with brief studies of various types, such as the editorial, the essay, and the short narrative sketch. Attention is given to the technique and the style of the short story. Frequent conferences with the instructor. Collateral reading.

First and Second Semesters.—3 hours credit.

303. NEWSPAPER WRITING.—An advanced course, open only to members of the staff of *The Carletonia*. Course 201 is prerequisite.

First Semester.—1 hour credit.

- 311-312. OLD ENGLISH.—A careful study of the Old English language and a brief survey of the literature. Representative selections of Old English prose and verse are read, including *Béowulf*, which is studied as a monument of both the literature and the life of the period. Given in 1915-16 and in alternate years.

First and Second Semesters.—3 hours credit.

- 313-14. CHAUCER AND MIDDLE ENGLISH.—An introductory course for students who have had no training in Middle English. Chaucer's *Prologue* is read, and selections from *The Can-*

terbury Tales and the minor poems; also a considerable amount of Middle English literature of the fourteenth and fifteenth centuries. Given in 1916-17 and in alternate years.

First and Second Semesters.—3 hours credit.

- 315-316. SHAKSPERE.—A critical study of five of Shakspeare's plays: *Macbeth*, 1 *Henry IV*, *King Lear*, *Twelfth Night*, and *The Winter's Tale*. Collateral reading.

First and Second Semesters.—3 hours credit.

- 317-318. ELIZABETHAN DRAMA.—A study of the English drama from its origin to 1642. Representative miracle and morality plays and interludes are read, and significant plays of the leading dramatists. Considerable emphasis is placed upon Shakspeare, who is studied in his relation to other dramatists of the period and with reference to his own development as poet and dramatist. Given in 1916-17 and in alternate years.

First and Second Semesters.—3 hours credit.

319. SPENSER AND MILTON.—A study of non-dramatic English literature of the sixteenth and seventeenth centuries, with especial attention to Spenser and Milton. Given in 1915-16 and in alternate years.

First Semester.—3 hours credit.

- 321-322. THE ROMANTIC MOVEMENT.—A study of the various phases of the Romantic Movement as manifested in English literature from Thomson to Keats. Attention is given to the interrelations of the literatures of England, Germany, and France during the period in question. Given in 1915-16 and in alternate years.

First and Second Semesters.—3 hours credit.

323. VICTORIAN POETRY.—A study of the poetry of the Victorian period with especial attention to Tennyson, Browning, and Arnold. Given in 1916-17 and in alternate years.

First Semester.—3 hours credit.

324. VICTORIAN PROSE.—A study of the leading characteristics and tendencies of the Victorian period as represented in the prose works of Carlyle, Newman, Ruskin, and Arnold. Given in 1916-17 and in alternate years.

Second Semester.—3 hours credit.

325. LITERARY CRITICISM.—A study of theories and principles of literary criticism, with practice in critical writing. Some

time is devoted to a study of selected critical essays from modern prose writers. Given in 1916-17 and in alternate years.

First Semester.—3 hours credit.

328. THE ENGLISH NOVEL.—A study of the history and the technique of the English novel from its beginning to the present time. Attention is given to the prevailing types of fiction in European literature of the eighteenth and nineteenth centuries, and to various social and economic movements reflected in the type of literature discussed. Given in 1915-16 and in alternate years.

Second Semester.—3 hours credit.

332. AMERICAN LITERATURE.—A study of the formative influences in the development of the literature of America from the colonial period to the present time. The literature is considered in its relations to underlying social and economic conditions, and to the literature of England.

Second Semester.—3 hours credit.

334. TEACHERS' COURSE.—Elsewhere listed as Education 308. A study of the aim and the plan of the high school course in English with consideration of texts and of the methods of instruction. Representative classics are studied in some detail. Open to Seniors who expect to teach English in high school. Students electing this course should elect also Public Speaking 314.

Second Semester.—2 hours credit.

PUBLIC SPEAKING.

MINOR.—All courses in Public Speaking except course 101-102 are counted toward a minor in Public Speaking. English 315-316 also may be so counted.

- 101-102. ELEMENTARY PUBLIC SPEAKING.—Study and practice in the effective delivery of literary masterpieces, with especial attention to voice training.

First and Second Semesters.—2 hours credit.

- 201-202. LITERARY INTERPRETATION.—Study and practice in the effective delivery of narrative, lyric, and dramatic literature, with especial attention to Shakspeare and to modern drama.

First and Second Semesters.—3 hours credit.

203. EXTEMPORANEOUS SPEAKING.—Study and practice in the presentation of various forms of public address, with especial

attention to the preparation and delivery of extemporaneous speeches upon topics of the day.

First Semester.—3 hours credit.

204. ARGUMENTATION AND DEBATE.—A careful study of the principles of argumentation, including analysis and brief drawing, with much practice in debating.

Second Semester.—3 hours credit.

302. INTERCOLLEGIATE DEBATE AND ORATORY.—A course providing training for students who represent the College in intercollegiate debates or oratorical contests. Bibliographies and speeches, typewritten and bound, are to be deposited in the library.

Second Semester.—3 hours credit.

304. INTERCOLLEGIATE DEBATE AND ORATORY.—A continuation of course 302. Not more than six hours credit may be earned in these two courses.

Second Semester.—3 hours credit.

- 305-306. ACTING DRAMA.—A course providing training for public presentation of plays under the auspices of the College.

First and Second Semesters.—1 or 2 hours credit.

- 307-308. ACTING DRAMA.—A continuation of course 305-306. Not more than four hours credit may be earned in these two courses.

First and Second Semesters.—1 or 2 hours credit.

314. TEACHERS' COURSE.—Elsewhere listed as Education 330. This course is open to Seniors who expect to teach English or Public Speaking in the high school.

Second Semester.—1 hour credit.

GEOLOGY

The geological museum, housed at present in Williams Hall, contains a good collection of minerals, rocks, and fossils. Students are expected to make themselves acquainted with the principal groups of these.

201. THE PRINCIPLES OF DYNAMICAL AND STRUCTURAL GEOLOGY.—Recitations, laboratory and field work.

First Semester.—3 hours credit.

202. HISTORICAL GEOLOGY.—The elements of Stratigraphy and Palaeontology. Recitations and museum work.

Second Semester.—3 hours credit.

GERMAN

MAJOR.—Any course is counted toward a major with the exception of course 101-102.

MINOR.—Any course is counted toward a minor, but course 101-102 counts for only four hours.

101-102. ELEMENTARY GERMAN.—This course is for those students who have had no German.

First and Second Semesters.—4 hours credit.

201-202. INTERMEDIATE GERMAN.—This course is intended for those students who have had two years of German in high school, or one year in college.

First and Second Semesters.—3 hours credit.

203. HISTORY OF GERMAN LITERATURE.—This course is a general survey of the field of German literature and should precede any of the more special courses.

First Semester.—3 hours credit.

204. LESSING.—Two or three of the most important works of this author are read. Some attention is given to the development of German literature immediately before and after Lessing.

Second Semester.—3 hours credit.

205. ELEMENTARY CONVERSATION AND COMPOSITION.—Constant practice in conversation on familiar topics from German life. *Freie Reproduktion* and brief daily themes based on the reading of modern German stories and newspapers. The course will be conducted in German. Open to students who have creditably completed courses 101-102 and 201-202 or their equivalents.

First Semester.—3 hours credit.

206. Continuation of course 205.

Second Semester.—3 hours credit.

301. GERMAN DRAMA.—Reading of selected dramas of the nineteenth century, with special attention to the modern realistic drama. Collateral reading on the lives and times of the authors read.

First Semester.—3 hours credit.

302. GERMAN DRAMA.—Continuation of course 301.

Second Semester.—3 hours credit.

303. SCHILLER.—Wallenstein and some other of Schiller's works not previously read by the class. A biography of Schiller is studied.

First Semester.—3 hours credit.

304. GOETHE.—Faust, Part I, is studied in detail and outlines of Part II given in lectures. A biography of Goethe is studied.

Second Semester.—3 hours credit.

305. HISTORICAL AND SCIENTIFIC GERMAN.—This course is intended especially for those Seniors who plan to do graduate work and will need a working knowledge of the language for this purpose. The kind of reading done depends upon the special needs of the class.

First Semester.—3 hours credit.

306. CONVERSATION AND COMPOSITION.—This course is intended for those who expect to teach German, and gives practice in speaking and writing. It is conducted in German. Consent of the instructor must be obtained.

Second Semester.—2 hours credit.

308. TEACHERS' COURSE.—Elsewhere listed as Education 310. This course is more practical than theoretical. It includes practice teaching and a practical study of various methods of teaching. The class is limited in size.

Second Semester.—2 hours credit.

GREEK

REQUIREMENTS.—Candidates for the B. A. degree have the option of an alternate requirement between mathematics and an ancient language in the Freshman year.

MAJOR.—A major in Greek includes 201-202, 301-302, 321-322, and such other courses above 200 as make a total of eighteen hours.

MINOR.—A minor consists of 101-102, 201-202.

Courses 231-232 are open to all students without any prerequisite Greek. Except for these two the courses are arranged in their proper sequence.

101. ELEMENTARY GREEK.—The elements of Attic prose.

First Semester.—4 hours credit.

102. XENOPHON.—Anabasis, books I-II. The account of Cyrus the Younger's expedition toward Babylon.

Second Semester.—4 hours credit.

201. XENOPHON, HOMER.—Anabasis, books III-IV, on the retreat of the Ten Thousand Greeks; selections from the Iliad.
First Semester.—3 hours credit.
202. HOMER.—Selections from the Iliad or the Odyssey.
Second Semester.—3 hours credit.
301. LYSIAS, DEMOSTHENES.—Three or four of the arguments written by Lysias for private cases, and one or more of the public speeches of Demosthenes.
First Semester.—3 hours credit.
302. XENOPHON, PLATO.—Selections from Xenophon's memoirs of Socrates; Plato's Apology of Socrates, the Crito, and selections from the Phædo.
Second Semester.—3 hours credit.
311. EPIC, LYRIC, AND PASTORAL POETRY.—Selections from the Odyssey, the Anthology, and Theocritus.
First Semester.—3 hours credit.
314. GREEK HISTORIANS.—Selections from Herodotus on the Persian wars, and books VI-VII of Thucydides on the Athenian expedition to Syracuse.
Second Semester.—3 hours credit.
321. GREEK DRAMA.—One or more plays each of Aeschylus and Sophocles. In this course and Greek 322 provision is made for a selective study of the development of Greek tragedy and for an acquaintance with Old Comedy.
First Semester.—3 hours credit.
322. GREEK DRAMA.—A continuation of Greek 321. One or more plays each of Euripides and Aristophanes.
Second Semester.—3 hours credit.
361. GREEK ORATORY.—The culmination of Greek oratory as found in the arguments of Aeschines and Demosthenes On the Crown.
First Semester.—3 hours credit.
364. PLATO.—Several of the shorter dialogs or selections from the Republic.
Second Semester.—3 hours credit.
231. GREEK LITERATURE IN TRANSLATION.—By lectures and assigned reading in the translation of Greek authors an effort is made to present a general view of the development of Greek literature, with emphasis on epic and dramatic poetry. Knowl-

edge of Greek is not required, as the course is intended for the general student.

First Semester.—3 hours credit.

242. GREEK AND ROMAN ART.—Chief attention will be given to the development and the main characteristics of vase painting, architecture, and sculpture. The course will consist of lectures, lantern illustrations, and assigned reading and investigations.

Second Semester.—2 hours credit.

HISTORY

All courses will be counted toward a major or minor.

101. HISTORY OF MEDIAEVAL EUROPE.—A general survey of European progress from the break-up of the Roman Empire to the fifteenth century.

First Semester.—3 hours credit.

102. MODERN EUROPEAN HISTORY.—This course and 101, of which it is the continuation, are intended to serve as the foundation for advanced work in the department and as an aid in other fields of study presupposing a general knowledge of European development.

Second Semester.—3 hours credit.

201. AMERICAN COLONIAL HISTORY.—An advanced study of conditions in America to 1781.

First Semester, 1917-18.—3 hours credit.

202. HISTORY OF THE UNITED STATES.—Emphasis will be placed on the social and economic organization, commercial and colonial expansion, and the place of the United States in world politics.

Second Semester, 1917-18.—3 hours credit.

207. HISTORY OF ENGLAND TO THE SEVENTEENTH CENTURY.—This course, altho dealing primarily with political history, will endeavor to show the significance of the constitutional, economic and intellectual progress.

First Semester.—3 hours credit.

208. ENGLAND AND THE BRITISH EMPIRE IN MODERN TIMES.—A continuation of course 207. Particular attention will be given to the evolution of social forces in modern England, colon-

ial expansion, and the relation of imperial politics to the present European situation.

Second Semester.—3 hours credit.

302. THE LAST HUNDRED YEARS IN EUROPE.—The development of Europe since its reconstruction by the Congress of Vienna. The development of nationalism and the years since 1848 will be stressed, as serving to explain present European conditions.

Second Semester.—3 hours credit.

305. THE AMERICAN REVOLUTION.—A careful treatment of the break with England at the close of the eighteenth century. The place of eighteenth century thought in the movement will be included.

First Semester.—3 hours credit.

306. TEACHERS' COURSE.—Elsewhere listed as Education 312. This course is designed for those intending to teach in secondary schools. If necessary, there will be a consideration of the needs of those planning for graduate work in history. Training in historical method and the organization and presentation of historical material for teaching purposes.

Second Semester.—2 hours credit.

307. THE FRENCH REVOLUTION.—An intensive study of the formative side of the work of the French Revolution. The political aspect (dealt with in course 101) will be secondary in importance. An attempt at an intelligent and fair estimate of the permanent work accomplished.

First Semester.—3 hours credit.

LATIN

All candidates for the B. A. degree who have not presented two units of Latin for admission are required to take Latin 11-12 and 21-22. These courses should be taken in the Freshman and Sophomore years. Students who enter with four units of Latin or have completed courses 11-12, 21-22 and 31-32 are admitted to Latin 101. Candidates for the B. A. degree entering with two units of mathematics have the option of an alternate requirement between mathematics and an ancient language. If Latin is chosen, three years instead of two are required for the B. A. degree.

MAJOR.—A major in Latin includes 101-102 and 201-202. Courses below 101 may not count on a major.

MINOR.—A minor includes anything above 21-22.

11-12. LATIN GRAMMAR, CAESAR AND SELECTED READINGS.—For those who begin Latin in college.

First and Second Semesters.—4 hours credit.

21-22. CAESAR, SELECTED READINGS AND CICERO.—Continuation of Course 11-12.

First and Second Semesters.—4 hours credit.

31-32. VERGIL.—Six books of the Aeneid are read. While syntax is not neglected more attention is now given to the literary qualities.

First and Second Semester.—3 hours credit.

101. CICERO AND LIVY.—Cicero, *De Senectute* or *De Amicitia*; Livy, selections.

First Semester.—3 hours credit.

102. HORACE.—Odes and Epodes. Careful attention is given to the meters and literary qualities of Horace.

Second Semester.—3 hours credit.

111-112. LATIN COMPOSITION.—Translation into Latin of connected passages.

First and Second Semesters.—1 hour credit.

201. THE ROMAN DRAMA.—Plautus, Terence and Seneca. Study of one or more plays of each author and of the origin and development of the drama and its subsequent influence.

First Semester.—3 hours credit.

202. TACITUS AND PLINY.—Tacitus, *Agricola* and *Germania*. Pliny, selected letters. A study is made of the style of these authors and of the characteristics of the Silver Latinity.

Second Semester.—3 hours credit.

211. THE HISTORY OF LATIN LITERATURE.—Lectures, assigned readings, papers.

First Semester.—1 hour credit.

212. ROMAN LIFE.—The course includes such topics as: the family, house, dress, amusements, food, sources of income and travel.

Second Semester.—1 hour credit.

301. CAESAR, CICERO, VERGIL.—Advanced course in the authors usually read in secondary schools, designed for supplementing

and reinforcing the knowledge already possessed by the students, and recommended to those expecting to teach.

First Semester.—2 hours credit.

302. TEACHERS' COURSE.—Elsewhere listed as Education 314. Designed especially for those who expect to teach Latin. The practical problems of the teaching of secondary Latin are discussed and applied. Portions of Caesar, Cicero and Vergil are reviewed.

Second Semester.—2 hours credit.

321. CICERO.—Selected letters, studied from the standpoint of style, politics, and personality.

First Semester.—2 hours credit.

322. ROMAN SATIRE.—Horace, Juvenal.

Second Semester.—2 hours credit.

324. VERGIL.—Advanced course. Emphasis is laid upon the appreciation of Vergil's poetry and his place in Latin letters. The reading includes selected fragments of Naevius and Ennius, and selections from Vergil's Eclogues, Georgics, Aeneid VII-XII, the Appendix Vergiliana, and Vergil's successors, Lectures and reports on topics in prosody, literary history, and interpretation.

Second Semester.—3 hours credit.

333. CATULLUS, TIBULLUS, PROPERTIUS.

First Semester.—3 hours credit.

341. LUCRETIVS.—De Rerum Natura. Books I, III and V. Aside from the interpretation of the text, some attention is given to the philosophy represented by Lucretius and its sources and development.

Second Semester.—3 hours credit.

LIBRARY SCIENCE

301. TEACHERS' COURSE IN LIBRARY SCIENCE.—Elsewhere listed as Education 325. Introductory and biographical. The general problems of the school library with particular reference to Minnesota high school libraries. Training in the use of the catalog and other bibliographic aids, selection and use of debate material, critical study of dictionaries, encyclopedias, atlases, periodicals, indexes, government publica-

tions, and other books used for reference. Lectures, classroom work and special assignments.

Juniors, First Semester.—1 hour credit.

302. TEACHERS' COURSE IN LIBRARY SCIENCE.—Elsewhere listed as Education 326. Bibliographical. Principles underlying the selection and evaluation of books. Special emphasis on children's literature and books suitable for pupil's home reading. Lectures and discussions. Examination and annotation of typical books. Course 301 prerequisite.

Juniors, Second Semester.—1 hour credit.

- 303-304. TEACHERS' COURSE IN LIBRARY SCIENCE.—Elsewhere listed as Education 327-328. Technical Processes. Elements of cataloging and related processes, accessioning, shelf-listing, classification, mechanical processes, book-mending, preparation for shelves. Administration of school library, book-buying, loaning of books. Courses 301-302 prerequisite. One hour classroom, two hours practical work in library.

Seniors, First and Second Semesters.—2 hours credit.

MATHEMATICS

REQUIREMENTS.—All students except those who avail themselves of the option between ancient languages and mathematics are required to take one year of mathematics beyond their high school credits.

Courses 103 and 104 are counted toward major and minor requirements only in those cases in which 101 and 102 are also taken in college. All courses after 104 count toward major and minor requirements.

A major in mathematics includes courses 201, 202, 203 and 204.

101. HIGHER ALGEBRA.—For those not having an entrance credit in this subject.

First Semester.—4 hours credit.

102. SOLID GEOMETRY.—For those not having an entrance credit in this subject.

Second Semester.—4 hours credit.

103. COLLEGE ALGEBRA.—For those presenting entrance credits in higher algebra. Review of quadratics, graphical representation, mathematical induction, the progressions, permutations,

complex numbers, theory of equations, logarithms, determinants.

First Semester.—4 hours credit.

104. TRIGONOMETRY.—Plane and spherical.

Second Semester.—4 hours credit.

- 201-202. ANALYTIC GEOMETRY.

First and Second Semesters.—3 hours credit.

203. DIFFERENTIAL CALCULUS.—Courses 203 and 204 cannot be taken without courses 201 and 202, but may be taken at the same time with them.

First Semester.—3 hours credit.

204. INTEGRAL CALCULUS.

Second Semester.—3 hours credit.

301. DIFFERENTIAL CALCULUS.—Second year.

First Semester.—3 hours credit.

302. INTEGRAL CALCULUS.—Second year.

Second Semester.—3 hours credit.

305. HISTORY OF MATHEMATICS.

First Semester.—3 hours credit.

306. TEACHERS' COURSE.—Elsewhere listed as Education 316.

Second Semester.—2 hours credit.

307. THEORY OF EQUATIONS.

First Semester.—3 hours credit.

308. DIFFERENTIAL EQUATIONS.

Second Semester.—3 hours credit.

309. ADVANCED TRIGONOMETRY.—Open only to those who have taken all courses in mathematics up to and including 302.

Graduate Students, First Semester.—3 hours credit.

310. SOLID ANALYTICAL GEOMETRY.

Graduate Students, Second Semester.—2 hours credit.

MUSIC

Courses in voice, piano, organ and violin are offered to college students for which credit is given only in the Conservatory of Music.

Courses in harmony, counterpoint, and composition, musical history, and public school music are open as electives to college students, and for these courses, as well as for membership in the College Choir or College Band, college credit is given. For description of these courses and their respective credits see pages 45-47.

PHILOSOPHY

REQUIREMENT.—Philosophy 201 is required in the Sophomore year of candidates for the B. A. degree.

MAJOR.—Any of the courses of the department count toward a major.

MINOR.—Any of the courses of the department count toward a minor.

201. PSYCHOLOGY.—An elementary course in general psychology, beginning with the structure and biological function of the nervous system and formulating the laws of mental growth and action. Text-book: Pillsbury's *Essentials of Psychology*.

Sophomores, First Semester.—3 hours credit.

202. SOCIAL PSYCHOLOGY.—A study of mental growth and action as shown in social relationships. With this end in view the instincts, sentiments and growth of self-conscious action are taken up. Further topics dealt with are the group mind, suggestibility, imitation, invention, etc. Text-books: McDougall's *Social Psychology*, Wallas' *The Great Society*. This course is also announced as Sociology 202.

Sophomores, Second Semester.—3 hours credit.

204. LOGIC.—A study of the principles and methods of inductive and deductive reasoning, with special emphasis on the working out of practical exercises. Text-book: Creighton's *Introductory Logic*.

Sophomores, Second Semester.—3 hours credit.

301. HISTORY OF PHILOSOPHY.—A foundation course in philosophy, sketching the development of Greek and Medieval philosophy. Text-book: Rogers' *History of Philosophy*.

Juniors, First Semester.—3 hours credit.

302. HISTORY OF PHILOSOPHY (since Kant).—A continuation of course 301, tracing the development of modern philosophy.

Juniors, Second Semester.—3 hours credit.

303. ETHICS.—A study of the principles of moral judgment. Text-book: Dewey and Tuft's *Ethics*.

Seniors, First Semester.—3 hours credit.

304. PHILOSOPHY OF RELIGION.—A study of the philosophical grounds of theism and of the psychological principles of religion leading to a critical valuation of religious systems.

Text-books: Boodin's *Truth and Reality*, James' *Varieties of Religious Experience*.

Seniors, Second Semester.—3 hours credit.

309. SOCIAL PHILOSOPHY.—A study of the physical, biological, psychological, and sociological conditions which underlie social development, and an evaluation of the ideals which are implied in social progress. Text-book: Keller's *Societal Evolution*; Urwick, *A Philosophy of Social Progress*. Lectures, readings, and discussions. This course is also announced as Sociology 302.

Juniors, First Semester.—3 hours credit.

306. PRESENT PHILOSOPHICAL TENDENCIES.—The typical tendencies of the day, including materialism, idealism, realism, pragmatism, and pluralism, will be surveyed and an attempt at a constructive treatment of the fundamental problems of reality will be made. Text-book: Boodin's *A Realistic Universe*.

Juniors, Second Semester.—3 hours credit.

PHYSICAL EDUCATION

COURSES FOR MEN.

Six credits are required of all students before graduation.

An examination, including measurements, and a careful examination of the vital organs and the sense organs is required of every student on entering college, and is given each semester thereafter. Those unable to take the regular courses because of physical disability are given special work.

Teams for intercollegiate competition in football, baseball, basketball, track and field athletics, tennis, indoor track athletics, and cross country running are formed each year. Students are given credit for participation in athletics during these respective team seasons. In addition interclass competition in these various branches is held each season.

101. Twelve lectures on "Personal Hygiene." Marching tactics. Graded mass drills. Apparatus work; mass work and graded work in squads. Gymnastic games. Swimming: each student is required to learn to swim. During warm weather

classes are conducted outdoors, the work consisting of various athletic events and games. (3 hours).

First Semester.—1 hour credit.

102. Floor work: continuation of the work of the previous semester. Swimming: each student is required to learn to swim with more than one variety of stroke. Out-of-door work, when weather permits. (3 hours).

Second Semester.—1 hour credit.

201. Marching evolutions. Graded mass drills. Apparatus work: mass work and graded exercises for squads. Gymnastic games. Swimming: each student is required to develop endurance in swimming. Out-of-door work, when weather permits. (3 hours).

First Semester.—1 hour credit.

202. Floor work: continuation of work of previous semester. Swimming: 100 yard swimming test. Out-of-door work, when weather permits. (3 hours).

Second Semester.—1 hour credit.

301. Graded mass drills and apparatus work. Group games and contests. Swimming: diving, rescue and resuscitation of drowning. Out-of-door work, when weather permits (3 hours).

First Semester.—1 hour credit.

302. Continuation of course 301. (3 hours).

Second Semester.—1 hour credit.

303. Teachers' course. Elsewhere listed as Education 317-318. History and systems of physical education. Philosophy of physical training. Anthropometry, physical diagnosis and prescription of exercise. Theory and practice of teaching gymnastics. Prerequisite, Biology 101. (2 hours).

First Semester.—2 hours credit.

304. Continuation of course 303. Normal practice. Coaching of athletics. (2 hours).

Second Semester.—2 hours credit.

305. Teachers' Course. Advanced normal practice. Prerequisite, courses 303 and 304.

First Semester.—2 hours credit.

306. Continuation of course 305.

Second Semester.—2 hours credit.

COURSES FOR WOMEN.

Six credits are required of all students before graduation.

Upon entrance, each young woman is given a physical examination to ascertain her physical efficiency, general condition and individual needs. If disabilities exist, special corrective work is arranged. One hour each week during the Freshman and Sophomore years is devoted to the study of personal hygiene by means of lectures and discussions.

101. Hygiene lecture (1 hour). Out door activities as long as weather permits, such as tennis, baseball, group games, and organized walking; general gymnastic exercises, breathing and relaxing exercises, games, and fancy steps. (2 hours).

First Semester.—1 hour credit.

102. Continuation of course 101. (3 hours).

Second Semester.—1 hour credit.

201. Hygiene lecture (1 hour). Out door activities as long as weather permits, such as tennis, baseball, group games and organized walking. Marching tactics, general gymnastic exercises, corrective exercises for obtaining better posture, bar bell drills, games, folk and aesthetic dancing and fancy steps. (2 hours).

First Semester.—1 hour credit.

202. Continuation of course 201. (3 hours).

Second Semester.—1 hour credit.

301. Advanced work in general gymnastics. Rhythmical exercises, balance and posture training exercises, folk and aesthetic dancing and games. (2 hours).

First Semester.—1 hour credit.

302. Continuation of Course 201. (2 hours).

Second Semester.—1 hour credit.

- 303-304. Teachers' Course. Also listed as Education 320. History and systems of physical training. Available materials, theory and practice of teaching.

Beginning November first and continuing for eighteen weeks, counting as 1 hour for each semester.—2 hours credit.

PHYSICS

MAJOR.—All courses except 201-202 will be counted toward a major. A major in physics shall include courses 203 and 204.

MINOR.—All courses will be counted toward a minor.

201-202. GENERAL PHYSICS.—A course intended primarily for arts students and those science students who desire a year of physics merely as a supplement to their other courses. The emphasis is laid upon the physical meaning of the principles, and the use of mathematics is reduced as much as possible for a course of college grade. Three hours of class room work and one two-hour laboratory period a week. Text-book: Kimball's *College Physics*.

First and Second Semesters.—3 hours credit.

203. MECHANICS AND HEAT.—A general course for students who expect to do advanced work in physics, chemistry or astronomy; or who plan to take up engineering. Three hours recitation and two two-hour laboratory periods a week. Demonstration lectures are given occasionally. Text-book: Spinney's *Text-book of Physics*. Prerequisite, analytical geometry, which may be taken at the same time.

First Semester.—4 hours credit.

204. MAGNETISM, ELECTRICITY AND LIGHT.—A continuation of course 203. Prerequisite, course 203.

Second Semester.—4 hours credit.

307. DIRECT CURRENT MACHINERY.—Beginning with a review of Ohm's law and electro-magnetic induction, this course includes the elementary theory of dynamo-electric machinery, together with laboratory work in self-induction; hysteresis of iron; efficiency, characteristic curves, power losses, etc., of direct current generators and motors. Text-book: Franklin and Esty, *Dynamos and Motors*. Laboratory manual; Franklin and Esty, *Dynamo Laboratory Manual*, Vol. I. Prerequisite, courses 201-202, or 203 and 204. Calculus is advised. Class room work three hours a week and one two-hour laboratory period.

First Semester.—4 hours credit.

308. ALTERNATING CURRENT MACHINERY.—A study of A. C. measuring instruments, alternators, polyphase systems, trans-

formers, induction motors, rectifiers, etc. A continuation of course 307. Prerequisite, course 307.

Second Semester.—4 hours credit.

309. ANALYTICAL MECHANICS.—An advanced course, including both statics and dynamics. It is recommended to students interested in pure physics, astronomy, applied mathematics, or engineering. Text-book: Miller and Lilly *Analytic Mechanics*. Prerequisite, courses 203-204 and calculus. (Alternates with course 311).

First Semester, 1916-17.—3 hours credit.

311. THEORY OF HEAT.—The subject matter in this course is chosen with especial reference to the needs of advanced students in physics and physical chemistry, and those contemplating the pursuit of mechanical engineering. The principles of thermo-dynamics are studied and some time is devoted to their application. Text-book: Edser's *Heat for Advanced Students*. Prerequisite, Physics 203 and 204 and Calculus. (Alternates with course 309).

First Semester, 1917-18.—3 hours credit.

312. TEACHERS' COURSE.—Also listed as Education 322. A course for Seniors who expect to teach physics in the secondary schools. One hour lecture and one discussion period a week. Several of the best high school texts are examined and compared. *The Teaching of Physics* by Mann is read and discussed; also articles in current school journals. An effort is made to furnish the beginning teacher with practical suggestions which will save him time and help him overcome some of his difficulties in conducting a laboratory course.

Second Semester.—2 hours credit.

ROMANCE LANGUAGES

FRENCH.

A combination of the conversational and the grammar method is used. After the first year French is, as a rule, the language of the classroom. The French table at Gridley Hall affords an opportunity for practice in conversation.

Any course except 101 and 102 is counted toward a major.

Any course counts toward a minor, but courses 101 and 102 count for only two hours each.

- 101-102. BEGINNERS' COURSE.—*Beginners' French*, Walter and Ballard; study of irregular verbs, easy reading, composition.
First and Second Semesters.—4 hours credit.
Three sections the first semester and two the second.
201. MODERN FRENCH PROSE.—Short stories. Comedies. Grammar review.
First Semester.—3 hours credit.
202. Continuation of course 201, with composition.
Second Semester.—3 hours credit.
301. CLASSICAL LITERATURE.—Lectures on the history of literature in the seventeenth century. Readings from Boileau, La Fontaine, Mme. de Sévigné and others. Composition.
First Semester.—3 hours credit.
302. THEATRE OF THE SEVENTEENTH CENTURY.—Study of plays by Corneille, Racine, Molière.
First Semester.—3 hours credit.
303. EIGHTEENTH CENTURY.—The greater masterpieces of Montesquieu, Voltaire, Rousseau, and others. Lectures and readings.
First Semester.—3 hours credit.
305. ROMANTIC LITERATURE.—Lectures on the literary revival of the early nineteenth century, with particular reference to the drama and the novel. Readings in Hugo, Balzac and other authors of the period.
Second Semester.—3 hours credit.
306. MODERN FRENCH POETRY.—Lectures, selected readings, declamations and reports. Prerequisite, course 305.
Second Semester.—3 hours credit.
308. SCIENTIFIC FRENCH.—A course planned especially for those who intend to do graduate work in scientific lines.
Second Semester.—2 hours credit.
309. A GENERAL SURVEY OF FRENCH LITERATURE FROM THE BEGINNINGS TO THE RENAISSANCE.—Chanson de Roland, Tristan et Isolde, Aucassin et Nicolète, les Fableaux, Roman de Renard, Roman de la Rose, les Chroniqueurs.
First Semester.—3 hours credit.
310. FRENCH LITERATURE FROM MAROT TO MALHERBE.—History of ideas during the Renaissance. Poetic theories of the Pléi-

ade and the beginnings of classicism. Lectures, readings and reports.

Second Semester.—3 hours credit.

SPANISH.

Any course except 101 and 102 is counted toward a major.

Any course counts toward a minor, but courses 101 and 102 count for only two hours each.

The intention in the first courses is to allow the student to hear Spanish spoken as much as possible. He is also encouraged at an early date to begin expressing his own ideas in Spanish orally and in writing.

101-102. ELEMENTARY COURSE.—Grammar, oral work and easy reading. Wagner's *Spanish Grammar*. Reading of modern prose and plays with practice in dictation, writing and speaking.

First and Second Semesters.—4 hours credit.

201. THE NINETEENTH CENTURY.—A detailed study of representative modern authors. Reports on assigned readings. Composition.

First Semester.—3 hours credit.

202. THE NINETEENTH CENTURY.—Continuation of course 201.

Second Semester.—3 hours credit.

301. CERVANTES.—Readings in the *Don Quixote*. Discussions of contemporaneous literature and reports on collateral reading.

First Semester.—3 hours credit.

302. DRAMA OF THE SEVENTEENTH CENTURY.—Representative plays of Lope de Vega, Calderon, Ruiz de Alarcon, and Tirso de Molina. Lectures, assigned readings, and reports.

Second Semester.—3 hours credit.

SOCIOLOGY

All courses count toward a minor.

201. GENERAL PRINCIPLES.—The nature and import of sociology, social evolution, social organization, social control, and social pathology. Text-book: Blackmar and Gillin's *Outlines of Sociology*.

First Semester.—3 hours credit.

202. SOCIAL PSYCHOLOGY.—This course is also announced as Philosophy 202.

Second Semester.—3 hours credit.

205. SOCIAL PROBLEMS.—This course is also announced as Economics 205.
Second Semester.—3 hours credit.
302. SOCIAL PHILOSOPHY.—This course is also announced as Philosophy 309.
First Semester.—3 hours credit.

SWEDISH

An increasing number of secondary schools are offering courses in the Scandinavian languages. Very few of these schools can employ a teacher for these courses alone. College graduates of Scandinavian parentage who possess some ability in the use of the spoken language can frequently find an opportunity to teach Swedish or Norwegian as part of their work. The following course is offered for those students who desire some training in Swedish grammar and in a correct use of the spoken language.

If there is a sufficient demand, more advanced courses will be offered later and also courses in Norwegian.

- 101-102. ELEMENTARY SWEDISH.—The essentials of grammar and drill in writing and speaking.
First and Second Semesters.—3 hours credit.

Conservatory of Music

PIANOFORTE

FIRST GRADE.—Czerny—Velocity. Etudes Op. 299. Bertini—Studies Op. 10. Heller—Etudes Op. 47. Krause—Trill Studies Op. 2. Bach—Little Preludes and Fugues. Czerny—Octave Studies.

Twenty hours credit.

SECOND GRADE.—Cramer—Bulow, 50 Selected Studies. MacDowell—Studies Op. 39. Studies selected from Czerny, Op. 740, Krause Op. 15. Heller Etudes Op. 45 or 49. Pischna—Door, Technical Exercises. Bach—Two and Three-part Inventions. Mayer—Octave Studies, Book II.

Twenty hours credit.

THIRD GRADE.—Clementi—Gradus ad Parnassum. Tausig—Daily Exercises. Studies selected from Czerny, Op. 740. Moscheles—Etude. Op. 70. Bach—French Suites. Döring—Octave Studies.

Twenty hours credit.

FOURTH GRADE.—Chopin—Etudes Op. 10 and 25. Scharwenka—Preludes and Studies, Op. 27. Nicodé—Studies Op. 12. Bach—Preludes and Fugues. Kullak—Octave Studies.

Twenty hours credit.

The above studies are not given entire, but such selections are made as will meet the individual needs of the pupil. For a statement of general material offered see catalog number of college bulletin.

ORGAN

FIRST GRADE.—Rinck's Organ School. Buck's Studies in Pedal Phrasing, easy selections from Tours, Smart, Batiste, Guilmant and others.

Twenty hours credit.

SECOND GRADE.—Rinck continued, Bach's Easier. Preludes and Fugues, Sonatas by Merkel and Ritter, Mendelssohn's Preludes and Fugues and Sonatas, selected pieces by Batiste, Guilmant, Smart, Saint-Saens and others.

Twenty hours credit.

THIRD GRADE.—Bach Sonatas, Chorals, Fugues and Toccatas, Handel Concertos, Widor Concertos, Concert pieces and selections by Reinberger, Guilmant, Thiele and others.

Twenty hours credit.

FOURTH GRADE.—Bach, the more difficult Preludes and Fugues, Concert Overtures, Fantasias, and Suites from Best, Reger, Elgar, Bossi, Lemare and others.

Twenty hours credit.

VIOLIN

FIRST GRADE.—Scales and broken chords in all positions. Bowing Exercises. Kayser, Op. 67, Mazas, Op. 36, Book II, Scale Studies, Schradieck, Kreutzer Etudes. Concertos by Viotti, Rode, de Beriot. Sonatas by Rust, Handel, Mozart. Pieces grade of Romance, Svendsen, Air de Ballet, de Beriot, Legende Wieniawski, Bach, Air G String.

Ensemble work.

SECOND GRADE.—Scales and arpeggios. Advanced work in double stopping. Fiorillo Etudes, David Caprices. Sonatas by Haydn and Mozart. Concertos by de Beriot, Godard, Spohr. Pieces grade of Fantasia Militair, Leonard, Andante and Scherzo, David.

Ensemble work.

THIRD GRADE.—Advanced technical work. Rode, 24 caprices, Gavinies Etudes, Sonatas of ancient and modern composers. Concertos by Lipinski, Molique, Spohr. Pieces grade of Rondo Capriccioso, Saint-Saens, Ballade et Polonaise, Vieuxtemps, Der Zephir, Hubay.

Ensemble work.

FOURTH GRADE.—Six sonatas Bach. 24 caprices Pagannini. Sonatas of ancient and modern composers. Concertos by Beethoven, Mendelssohn, Bruch, Wieniawski. Concert pieces by Sauret, Saint-Saens, Vieuxtemps, Sarasate.

Ensemble work.

Selections will be made from the above according to the individual requirements of the student.

VOICE

FIRST GRADE.—Breathing gymnastics, tone formation, connecting of registers, vowel studies and phonetics. Vocalises of Sieber, Concone, Lutgen, and Panofka. Study of the English ballad as a form. Songs by Jensen, Lassen, Strelezki, Grieg, Buck, Kucken, Gounod and others.

Six hours credit.

SECOND GRADE.—Studies in phrasing, colorature exercises, vocalises of Vaccai, Blondini, Marchesi. Italian pronunciation. Songs by Mendelssohn, Reinecke, Verdi and others.

Ten hours credit.

THIRD GRADE.—Studies in rapid execution, vocalises by Panofka. Study of the German "Lied." Songs by Schumann, Schubert, Rubinstein, Liszt, Raff, Mozart, Donizetti, Bellini.

Twelve hours credit.

FOURTH GRADE.—Selections from the standard operas and oratorios, including the works of Bach, Handel, Haydn, Weber, Wagner, Gounod, Verdi, Saint-Saens, and Mascagni. Songs by Brahms, Gluck, Franz and others. *Twelve hours credit.*

HARMONY, COUNTERPOINT AND COMPOSITION

MUSIC 101.—Elements of harmony, harmonization of melodies. Use of principle and subordinate chords. Inversions.

First Semester.—2 hours a week. *Two hours credit.*

MUSIC 102.—Seventh chords and inversions, passing tones. Use of dominant and secondary sevenths. Writing from figured bass and from given melody.

Second Semester.—2 hours a week. *Two hours credit.*

MUSIC 203.—Suspensions, anticipations, ninth and eleventh chords. Harmonization of chorals.

First Semester.—2 hours a week. *Two hours credit.*

MUSIC 204.—Advanced harmony. Altered chords and their uses. Chorals, modulation. Accompaniments.

Second Semester.—2 hours a week. *Two hours credit.*

MUSIC 305.—Counterpoint, in two, three, and four parts.

First Semester.—2 hours a week. *Two hours credit.*

MUSIC 306.—Counterpoint strict and free up to five parts, also double and triple counterpoint at the 8th and 10th. Canon.

Second Semester.—2 hours a week. *Two hours credit.*

MUSIC 407.—Canon and Fugue. Free composition.

First Semester.—2 hours a week. *Three hours credit.*

MUSIC 408.—Free composition, orchestration.

Second Semester.—2 hours a week. *Three hours credit.*

HISTORY OF MUSIC

MUSIC 109-110.—GENERAL HISTORY AND APPRECIATION.—A general survey of the development of music from ancient to modern times. Attention will be given to the structure of the principal forms, a study of the instruments, the prevailing styles of the different periods, the great masters and their relation to the progress of musical art. No technical knowledge is required.

First and Second Semesters.—2 hours a week thruout the year.

Four hours credit.

MUSIC 211-212.—MUSIC OF THE NINETEENTH CENTURY.—The great Romanticists. Piano music from Beethoven to Liszt. Orchestral and chamber music. The art song. Modern virtuosi. Opera and oratorio. National schools. American music. Modern tendencies. Musical education. Textbook, Dickinson's *The Study of the History of Music* supplemented by assigned readings and the analysis of musical compositions. Students have access to a well-selected library of over three hundred volumes. An advanced course open to students who have completed Music 109-110 and who have sufficient technical preparation.

First and Second Semesters.—2 hours a week thruout the year.

Four hours credit.

EAR TRAINING

MUSIC 113.—Recognition of intervals, study of rhythms, writing simple melodies from dictation.

First Semester.—1 hour a week. *One-half hour credit.*

MUSIC 114.—Recognition of chords and their inversions, writing in two and four parts from dictation. Original melodies in simple song form.

Second Semester.—1 hour a week. *One-half hour credit.*

COLLEGE CHOIR

MUSIC 115-116.—Choral Singing.

First and Second Semesters.

One hour credit.

SUPERVISOR'S TRAINING COURSE IN PUBLIC SCHOOL MUSIC

MUSIC 117-118.—Sight singing and ear training, music notation and terminology, chorus conducting, melody writing, study and comparison of music series, methods of public school music.

First and Second Semesters.—5 hours a week *3 hours credit.*

MUSIC NOTATION AND SIGHT SINGING

MUSIC 119-120.—The course in music notation is planned for any student who wishes to learn to write music with correct notation and to spell, pronounce and define all terms ordinarily used in music teaching. No outside preparation is required.

In the sight singing class the student learns to sing correctly at sight any vocal music of ordinary difficulty in one, two, or three parts.

First and Second Semesters.—2 hours a week. 1 hour credit.

COLLEGE BAND

MUSIC 121-122.—The band has become a permanent organization. All students who play band instruments are eligible for membership, a reasonable degree of proficiency being the only requirement. The band furnishes music for the various athletic events and gives concerts at various times thruout the year.

First and Second Semesters.—2 hours a week. 2 hours credit.

EXPENSES

The terms for instruction in the various branches of music per semester of eighteen weeks, are as follows:

Voice and Piano—Mr. Strong and Mr. Lawrence.

Two private half hour lessons per week.....\$72.00

One private half hour lesson per week..... 40.50

Violin, Advanced Grade—Miss Mann.

Two private half hour lessons per week..... 72.00

One private half hour lesson per week..... 40.50

Piano and Preparatory Violin—Miss Mann.

Two private half hour lessons per week..... 54.00

One private half hour lesson per week..... 31.50

Normal Course in Public School Music..... 25.00

Harmony, Counterpoint and Composition..... 14.00

History of Music..... 6.00

Notation and Sight Reading..... 4.00

Ear Training 1.50

Rent of room, one hour per day for violin practice... 1.00

Rent of Piano, one hour per day..... 4.50

Rent of Pipe Organ, one hour per day..... 22.00

(Additional hours on organ, half price).

Beginners in instrumental music will not be accepted for less than two lessons a week.

Student Privilege Fee, per semester.....	\$ 2.50
Graduation Fee.....	5.00
Table board at Gridley Hall, or the Men's Dormitory, per semester	72.00
Furnished rooms in private residences, per week	\$1.50 to 2.50
Room and board in private families, per week, \$5.00 to	7.50

The college tuition for music students taking college work is at the rate of \$10 per semester per three-hour course.

Students taking the Normal Course in Public School Music will not be required to pay the extra fee for Notation, Sight Reading, and Ear Training.

All semester bills are payable at the time of enrollment.

Students are expected to enter at the beginning of the semester.

Only in cases of severe illness of more than two weeks duration will any deduction be made for absences from lessons. In such cases the Conservatory will share the loss equally with the student.

Lessons falling on legal holidays or special holidays, will not be made up, except in special cases and at the convenience of the instructor.

The annual catalog published each year in March contains a full account of the current year's work in both the College and the Conservatory of Music.

This bulletin contains the preliminary announcements for 1916-17. Any additions or changes in the list of instructors, as given in the annual catalog, or in the courses offered will be announced in the bulletin issued early in September.

